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Exhibit 2

Intervenor City and County of San Francisco comments on PSA Mirant Potrero Unit 7
00-AFC-04

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STATE OF CALIFORNIA
State Energy Resources
Conservation and Development Commission

In the Matter of:	Docket No. 00-AFC-4
MIRANT'S (FORMERLY SOUTHERN ENERGY) POTRERO POWER PLANT UNIT 7 PROJECT	INTERVENOR CITY AND COUNTY OF SAN FRANCISCO COMMENTS ON THE PRELIMINARY STAFF ASSESSMENT

I. INTRODUCTION

The City and County of San Francisco (CCSF) submits the following comments to the May 31, 2001 Preliminary Staff Assessment (PSA) for the Potrero Power Plant Unit 7 (the proposed project) issued by the California Energy Commission (CEC) staff.

CCSF's comments demonstrate the extensive problems with the proposed project and the staff analysis of the project impacts. These problems and the incompleteness of the PSA make it clear that significant project modifications, additional data and further staff analysis are needed. Until the Applicant has provided complete data on the project and the CEC staff has completed its analysis of impacts and mitigations and recommended approval or disapproval of the project, CCSF cannot take a position on the project or recommend an appropriate mitigation package.

A. The PSA Is Incomplete

On June 28, 2001, CCSF filed a motion requesting the CEC to enter a scheduling order that would allow the staff to revise and recirculate for public comment the PSA prior to issuance of the Final Staff Assessment (Motion). CCSF filed the Motion because after reviewing the PSA and attending the workshops, it was clear that there were significant omissions in the PSA and that a revised PSA that contained a complete description of the proposed project, significant impacts, and proposed mitigations should be issued.

CCSF's Motion identified four broad categories of omitted PSA information. These categories are:

(1) information the PSA explicitly states will be studied or addressed by the time of the CEC hearings or the issuance of the FSA;

(2) other information requested by the CEC staff or other agencies which CEC staff considers necessary in order to formulate conclusions or recommendations;

(3) uncertainties in the project proposed or in applicable regulatory standards; and

(4) uncertainties the CEC staff attempts to address by including them into a condition of certification.

There are many specific examples of missing, incomplete or inaccurate data. In addition to the "Issues Remaining" as listed on the PSA pages 1-3 to 1-6, the following is a partial list of "open" issues and some of the additional information or analyses which the following CCSF comments indicate are required:

- The impact on local air quality of the agreement between the Applicant and BAAMQD to exceed the annual operating limits for the Potrero peaker units.
- The public health impacts of $PM_{2.5}$.
- The toxic health effects of diesel emissions during construction activities.
- The amount of methane and CO_2 that will be released.
- An analysis of emissions during construction of the transmission line between the proposed project and the Hunters Point substation.
- The implications of the intake and discharge dynamics of the proposed project on circulation and thermal structure in the Bay.
- The potential mortality of entrained organisms and impinged organisms from the combined operation of Unit 3 and the proposed Unit 7.
- The substantial increases in housing and live/work units in the proposed project area over the past decade.
- The required agreements with the San Francisco Port.
- The cross-media issues such as dioxin generation and fallout or water quality implications from other air pollutants.
- The environmental impacts of dredging the contaminated sediments in the Bay and the Islais Creek.
- PG&E's contractual obligation to remediate the Potrero site, the impact of the PG&E bankruptcy and the impact of the proposed project on the remediation requirements.
- Transmission or a combination of transmission and other alternatives (such as a smaller power plant) as alternatives to the proposed project.

- Whether the Jefferson-Martin line, as well as the other options in the CaISO San Francisco Long Term Study, can meet the objectives of the proposed project.

- The potential for demand side management to replace some of the proposed project generation.

These omissions, together with the "Issues Remaining," as identified by the CEC staff are significant.

In addition, in its current form, the PSA does not provide sufficient detail or analysis to allow CCSF to understand the proposed project impacts, properly identify and discuss mitigation measures. (Public Resource Code, Section 21080.5 and Cal. Code of Regulations, Title 14, Section 15251(k).) It is significant that due to inadequate and incomplete information, the CEC staff is unable to make a recommendation to reject or support the proposed project. (PSA, page 1-7) The public and the CEC staff are disadvantaged by not having the information available for review and analysis prior to issuance of the FSA

B. A Revised PSA Should Be Issued

A supplemental PSA is necessary to allow the staff to gather the missing data, review it, and to produce new findings and conclusions regarding the revised proposed project. In addition, a supplemental PSA will provide CCSF, other interested parties, and the public their statutorily mandated right to review and respond in a meaningful way to the project. Under CEQA, a supplemental or subsequent EIR is mandated when substantial changes to the project will require major revisions to the previous EIR because of the involvement of new significant environmental effects. (CEQA Guidelines, Section 151652(a)). CCSF, other interested parties, and the public will be prejudiced if they are not presented with a complete project description and staff analysis of the project for review and public comment in the PSA.

In addition, there are two significant omissions in the PSA that must be addressed in a revised PSA. First, the PSA does not evaluate the impact of the Ordinance approved by the San Francisco Board of Supervisors on May 29, 2001 adopting requirements that must be met before CCSF may support the proposed Potrero Unit 7 project. (Maxwell Ordinance)

Under the Warren-Alquist Act and the CEC regulations, the CEC cannot approve an AFC unless the proposed project conforms to applicable state, local, or regional laws, ordinances, regulations, or standards (LORS), unless there is a finding of overriding considerations. (Public Resources Code Section 25523(d); Cal. Code Regs., Title 20, Section 1744; Public Resources Code 25525. Under state law and the CEC regulations, the PSA must include a detailed discussion and assessment of compliance with LORS. A supplemental PSA, containing further discussion and assessment of impacts and proposed mitigation measures, is needed to determine if the proposed project can conform to the requirements of the Maxwell Ordinance.

Secondly, The PSA also lacks any discussion of the potential impacts of the proposed project on energy prices paid by San Francisco and Bay Area electricity consumers. Because of the potential for the exercise of market power by the Applicant, these potential impacts are substantial.

If the CEC approved this project and the Hunters Point Power Plant is shut down as required by the Maxwell Ordinance, the Applicant will own all the electric generation in San Francisco. The Applicant will therefore have significant market power. The Bay Area has already been identified as a "congested zone." The closure of the Hunters Point Power Plant, which is clearly anticipated by the Applicant and required by the Maxwell Ordinance will only exacerbate this situation. The existence of that market power raises substantial economic and reliability risks for San Francisco and potentially all the Bay Area. The staff must perform its own analysis of market power and determine if, as a condition of certification a RMR contract, or some type of

long term cost-based contract is required to avoid the exercise of market power. A market power analysis should be included in a supplemental PSA. CCSF and all interested parties should have the opportunity to comment on this analysis prior to the issuance of the Final Staff Assessment.

C. The Maxwell Ordinance

1. Requirements of the Ordinance

The Maxwell Ordinance, a copy of which is attached to these Comments as Appendix 1, provides that in order for the CCSF to support the proposed project, the following minimum conditions must be met:

(1) The proposed project and the terms and conditions of its approval will reduce potential and actual emissions of criteria, toxic, and hazardous air pollutants from levels that would occur in Southeast San Francisco from whatever source without the construction and operation of the proposed fossil fuel electric generation project at Potrero Hill Power Plant ... (such levels include emissions from all actual and potential sources that impact Southeast San Francisco, except that the emissions from the Hunters Point power plant shall be deemed to be zero, and the emissions from Potrero Units 4, 5, and 6 shall be calculated on the basis of actual historic annual emissions for each unit);

(2) The proposed project will result in a binding, enforceable agreement, ... that the Hunters Point Power Plant shall be permanently shut-down as a source of fossil fuel generation by a date certain which shall be no later than 90 days from the initial firing of generation equipment for any new fossil fuel generation at the proposed site;

(3) The proposed project will result in a binding, enforceable agreement, ... which provides that all existing peaker units at the Potrero Power plant shall be: (a) retrofitted or rebuilt, using the best available pollution control technology (BACT) and (b) used only when (i) the proposed Unit 7 is unavailable due to CaISO scheduled maintenance, or emergencies of which the City is notified, in writing ...including notification of the time estimated to complete the emergency maintenance, or (ii) if there is a natural disaster which disrupts the flow of natural gas to the Potrero Power Plant. In the event the peaker units are used, the owners and operators of the Plant shall provide written reports of emissions, as specified by the Department of Public Health, to the City and County of San Francisco;

(4) The proposed project will use the least emitting pollution control technology;

(5) The proposed project will result in a binding, enforceable agreement ... which provides that the existing Unit 3 at the Potrero Power plant shall be using the least emitting pollution control technology by a date certain which shall be no later than 90 days from the initial firing of generation equipment for any new fossil fuel generation at the proposed site;

(6) The proposed project will result in a binding, enforceable agreement... requiring the shut down of Unit 3 of the Potrero Hill power plant as soon as the facility is no longer needed to sustain electric reliability in San Francisco and the surrounding area ... and further requiring that within one year of permanent shutdown, the decommissioning of Unit 3 of the Potrero Hill power plant and remediation of the site will begin expeditiously;

(7) The Applicant provides sufficient mitigation to the impacted communities in Southeast San Francisco to offset any adverse social, economic, cultural, environmental, and public health impacts associated with the fossil fuel generation;

(8) The Applicant agrees to notify the City and County of San Francisco before it seeks to change or modify any permit required to own, operate, or construct the proposed fossil fuel electric generation project at Potrero Hill Power Plant; and

(9) Any agreement by City officials or departments for or related to new electric generation in San Francisco requires approval of the San Francisco Board of Supervisors.

2. Compliance with the Maxwell Ordinance

Under state law, the PSA must include a detailed discussion and assessment of LORS, including the Maxwell Ordinance. CCSF reserves further comment and analysis as to whether the proposed project complies with the Maxwell Ordinance until the CEC staff has:

1) completed its evaluation of the data and analysis that are missing from the PSA, and the Applicant has supplied the additional information that has been requested in the PSA or during the workshops;

2) determined the impacts; and

3) recommended appropriate mitigations.

CCSF believes that the proposed project, after appropriate mitigations, could comply with the Maxwell Ordinance. CCSF looks forward to continuing to work with the CEC staff and others in identifying the full extent of impacts from the proposed Potrero project.

3. The Shut Down Of The Hunters Point Plant

The City also signed an agreement with PG&E calling for the permanent shutdown of the Hunters Point Power Plant as soon as the facility is no longer needed to sustain electrical reliability. This agreement was predicated on substantial evidence that air pollution in Southeast San Francisco is a large contributor to disease and sickness in this part of San Francisco. CCSF is very concerned that the PSA does not adequately analyze or address the shutdown of the Hunters Point Power Plant or the environmental justice issues for the communities near to the proposed project. The PSA recognizes that an environmental justice population exists in close proximity to the proposed project. However, there is a complete failure on the part of the technical staff of the CEC to acknowledge, incorporate, and recommend mitigations based on environmental justice throughout the PSA.

The shutdown of the Hunters Point Power Plant is an important issue for San Francisco. CCSF looks forward to working with the CEC staff, CaISO, the Applicant, PG&E and others in meeting this important goal.

II. SPECIFIC SUBJECT AREAS

A. AIR QUALITY

Because of the location of the plant, the close proximity and topography of the surrounding residential community, and the predominant wind conditions during the summer months (when the most electricity is likely to be produced), CCSF has considerable concern that the PSA has not taken adequate measures to protect of public health from negative air quality impacts. Southeast San Francisco was identified early in the process by the CEC as being sensitive to environmental justice concerns. (April 12, 2001 Environmental Justice Workshop held at Potrero Hill Neighborhood House Auditorium) 1990 U.S. Census data reveal that minorities represent more than 50 per cent of the residences within six miles of the proposed Project[1].

[1] Potrero Issues Report. November 3, 2000. Page 4

Southeast San Francisco is already exposed to high levels of pollutants from the existing power plants, nearby industries and from two major freeways. Additionally, the topography and meteorology of the area leads to an increased direct exposure to pollutants[2]. CCSF believes that there should be no further degradation of the environment in Southeast San Francisco and that the standard of care and concern for the environmental justice populations in Southeast San Francisco must be high. (*See* further discussions below in the Socioeconomic Comments.

1. The PSA Fails To Properly Assess Current Local Air Pollution Impacts

The PSA relies on air quality data through 1999 when performing its criteria pollutant analysis. While this data may have been sufficient in the past, the recent energy emergency in the State and the Bay Area has caused significant increases to the pollutant levels from power plants in the Bay Area. More recent data on air quality emissions from power plant sources is more relevant in light of the changed circumstances of the energy emergency.

For example on March 29, 2001, the Applicant entered into an agreement with the BAAQMD that allowed the distillate or fuel oil fired peakers at the Potrero Power Plant to operate for more hours than the previously authorized maximum of 877 per year. (There is no limit on the number of hours these peakers can operate). The Potrero peakers have exceeded their 877-hour annual operating limit. Under the agreement with BAAQMD, the peakers can continue to operate throughout 2001. The BAAQMD may then reauthorize the Applicant to continue to exceed the 877 hours per year ceiling. Prior to 2001, the number of operating hours for the Potrero peakers had been decreasing. It is CCSF's understanding that in 1990, the three units produced approximately 35 GWh of power, and by 1996, that total had dropped to 22 GWh. Were all three units to operate for 877 hours, at 52 MW output each, the units could produce a total of 137 GWh. Using the emission factor of approximately 1 ton NO_X /588 MWh[3], NOx emissions from these three units could increase from 23.5 tons NO_X in 1996 to greater than 40 tons per year. All of these emissions are near the residents of Hunters Point and Potrero Hill.

The CEC staff should perform a criteria pollutant analysis with the more recent data as well as estimated emissions based on expected 2001 production levels from the Bay Area power plants. CCSF believes that if this data were included, it is likely that violations of the state and the federal ozone standards would occur. Air Quality Figure 2 on page 4.1-9 shows that while San Francisco did not violate either the state or federal ozone standard between 1990 and 1999, it came very close to exceeding the state ozone standard of 0.09 ug/m3 in both 1995 and 1999. Increasing the NO_X inventory by hundreds of tons from Potrero and the other Bay Area power plants is likely to change the pollutant concentrations.

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[2] Page 4.1-5 of the PSA indicates that mixing heights can go as low as 80 feet, which is below many of the residents who live on the surrounding hills. Therefore, these residents are exposed not only to directly emitted pollutants, but also to pollutants that only form due to the mixing of gases - such as ozone and secondary particulate matter. This same page also indicates that the winds blow predominantly from the west (i.e. directly on the nearby residents) from April through September – the exact time period where electricity production is at its highest and ozone exceedances are at their worst.

[3] Data Response to Data Request of PBNA Set 2, question 70.

2. The PSA Does Not Assess The Public Health Impacts Of $PM_{2.5}$

The PSA states on page 1-1, "[w]hen issuing a license, the Energy Commission acts as lead agency... under the California Environmental Quality Act... , and its process is functionally equivalent to the preparation of an environmental impact report...."

Particulate matter smaller than 2.5 microns ($PM_{2.5}$) has been determined by the EPA to pose a distinct threat to public health and is the basis for EPA's inclusion of $PM_{2.5}$ as a National Ambient Air Quality Standard (NAAQS) pollutant.[4] Under CEQA, the CEC is obligated to assess the public health impacts from the proposed project's emissions of $PM_{2.5}$.

There is no analysis in the PSA of the health impacts of $PM_{2.5}$. Because particulate matter, even fine particulate matter, can have significant localized impacts, especially during periods of low wind and stagnation, a thorough analysis of the health impacts of increased $PM_{2.5}$ emissions from the proposed project is both required by CEQA and warranted to protect the public health.[5]

Air Quality Figure 4 (PSA page 4.1-11) indicates that the source of $PM_{2.5}$ data is the Arkansas Street monitoring station. Furthermore, it appears that the 15 and 65 ug/m3 annual average and 24 hour maximum EPA standards have been violated. This data requires that the staff conduct an analysis of $PM_{2.5}$ and determine whether mitigation is required.

3. The SO_2 Construction Impacts Should Be Analyzed

The modeling results for the proposed project are contained on Table 8.1-15 of the AFC. Table 8.1-15 illustrates that during construction, the 24-hour SO_2 standard will be violated. However, Air Quality Table 5 in the PSA (page 4.1-6) contains no information on SO_2. CCSF requests that the impact from construction on SO_2 emissions be evaluated and that SO_2 emissions from construction be mitigated as appropriate.

4. The Toxic Health Effects Of Diesel Emissions From Construction Activities Should Be Considered

The California Air Resources Board has identified particulate emissions from diesel fueled engines as a known carcinogen.[6] However, the PSA is silent on the impact from diesel emissions from construction equipment. The revised PSA and the FSA should contain a discussion of the health effects from diesel emissions.

5. Construction Impacts Should Be Mitigated

Construction emissions are of particular concern because, unlike emissions from the plant, these emissions are released close to ground level and disperse rapidly to the surrounding residential community. The construction impacts from the project may be significant, and could result in a violation of the 24-hour PM_{10} standard and the SO2 standards.

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[4] South Camden Citizens in Action v. New Jersey Dept. of Environmental Protection, 2001 U.S. Dist LEXIS 4768, April 2001 at 48.

[5] *See* also, A. Peters, et al. "Increased Particulate Air Pollution and the Triggering of Myocardial Infraction," Circulation 2001; 103: 2810 (June 12, 2001) (relationship between PM2.5 exposure and the onset of heart attacks).

[6] At the meeting of the Scientific Review Panel of the California Air Resources Board on October 16, 1997: Dr. John Froines asked," Whether diesel fuel is listed as a carcinogen for Prop. 65 purposes. The Director of AAMQD responded, "Yes." *See,* California Air Resouces Board Website.

Retrofit devices for diesel fueled engines can achieve significant PM_{10} and NOx reductions. Furthermore, the use of low sulfur (below 15 ppmv) diesel fuel can achieve significant reductions in PM_{10}. The PSA should require that construction equipment be retrofitted with emission control equipment and that low sulfur (below 15 ppmv) diesel fuel be used.

6. The Effects Of Methane And CO_2 Must Be Taken Into Account

Methane, though not considered a criteria pollutant, is a potent greenhouse gas (approximately 20 times stronger than CO_2). The PSA does not estimate the amount of unburned natural gas that will be released annually by the proposed project. Similarly, CO_2 is a recognized greenhouse gas. These emissions should be analyzed and mitigated.

7. The Cumulative Impacts Discussion Is Inadequate

The discussion of cumulative impacts on pages 4.1-17 and 4.1–18 of the PSA does not contain sufficient information to enable CCSF to perform a thorough analysis. First, the PSA must provide the assumed operations rates for the sources listed in Air Quality Table 7 (page 4.1-18). In particular, in order to evaluate cumulative impacts, CCSF needs the assumed operations level for the proposed Potrero Unit 7, Potrero Units 3-6, and Hunters Point. Second, the cumulative impacts of the construction activities must also be considered. Finally, the PSA should contain maps illustrating the location of maximum impact for each pollutant. Providing universal transverse mercator (UTM) coordinates is not sufficient to educate the community as to exactly where the highest impacts will occur.

8. Localized PM_{10} Is Not Mitigated By SO_2 Credits

The PSA makes the unsupported assumption that PM_{10} can be mitigated by mitigating secondary SO_2 sources. The PSA must include credible scientific sources that support the assumption that SO_2 will generate PM_{10} in a ratio of 3:1. The PSA also must include an analysis of the amount and generation rate of PM_{10}, as well as where the PM_{10} is likely to be generated so that an accurate assessment can be made of the proposed mitigation option.

9. The Proposed Emission Reduction Credits Are Not Satisfactory

CCSF agrees with the PSA conclusion on 4.1-19 that the proposed project's cumulative PM_{10} impact is significant. CCSF also agrees with the PSA conclusion that the PM_{10} offset package (84.5 TPY of PM_{10} and 78 TPY of SO_2 from Antioch and Martinez area) is not likely to effectively mitigate the project's PM_{10} contribution in the Potrero/Bayview area where the plant will be built. The ERCs the Applicant proposes to use to offset the emissions from the proposed project will not mitigate local air quality impacts for several reasons. First, the proposed offsets are derived from shut downs of facilities located in the East Bay. Improvements in air quality from these locations do not affect the air quality in Southeast San Francisco. Secondly, the shut downs that created the ERCs all occurred in the late 1980's, over 10 years ago.

The ERCs from the PG&E Avon and Martinez facilities were derived from the shut down of these two plants in the late 1980's. At this time, the emissions limits for power plants were very high, so the shut down of these small facilities led to the generation of a tremendous amount of credits. Since that time, the BAAQMD has adopted BACT requirements that will lower power plant emissions by over 90 per cent between 1995 and 2005. Given this fact, the ERCs being proposed for Potrero Unit #7 should be discounted by 90 per cent.

CCSF strongly urges as a condition of approval that the Applicant be required to purchase local emission offsets and that these emissions offsets should represent current actual emissions sufficient to create a net reduction in human exposure for the communities surrounding this project.

10. The PSA Does Not Provide An Analysis Of Emissions From The Construction Of The Transmission Line Between The Proposed Project And The Hunters Point Substation

The AFC indicates that the construction of this transmission line will create significant emissions. (AFC, Section 8.1.2.1.2) However, the construction of the line does not appear to be discussed in the PSA. The impacts from this construction activity need to be addressed in the PSA and any significant impacts need to be mitigated.

11. The CEC Should Require The Same NOx Mitigation For The Proposed Project As Was Recently Approved By The CEC For The Otay Mesa Project

The CEC should require more stringent control of NO_X emissions from the Project. Applications for power plants in California and elsewhere in the United States are proposing lower emission levels than the 2.5 ppmvd level proposed for this Potrero Project. The Otay Mesa project approved by the CEC will achieve lower NO_X emission limits by using SCONOx. While the CEC recognizes that this technology is still unproven in large power plant applications, the Otay Mesa certification requires that a 1.0 ppmvd level be achieved within 20 years. The Commission's final approval states: "[a]ccording to Applicant, the SCONOx system promises significant environmental benefits, if it can be scaled-up with a target NOx emission concentration of 1.0 ppmvd (at 15% O_2) on a 24-hour average. Condition AQ-27 provides a 6 month optimization period for the SCONOx system during which the project owner will undertake reasonable efforts to achieve a NOx emission level of 1.0 ppmvd (at 15% O2). Condition AQ-59 requires the project owner to achieve a NOx emission level of 1.0 ppmvd (at 15% O2) within 20 years after start-up no matter which emission control system [SCONOx or SCR] is employed.[7] These conditions of approval imposed by the CEC on the Otay Mesa project should also be imposed in this case.

12. The Proposed PM_{10} Mitigation

The CEC suggests mitigating 27.5 tons of PM_{10} in the winter months preferably locally as an additional offset. Limiting the mitigation to a winter appears to rely on the premise that PM_{10} below the current state standard will not constitute a significant effect. A body of research evidence supports linear health effects of particulate pollution below the current state and federal standards. CCSF believes that mitigation should be sufficient to create a net reduction in human ambient exposure throughout the year. In addition, mitigations should continue throughout the operational duration of the plant, which could last for 50 to 60 years.

In principle, CCSF supports the funding of a program similar to the BAAQMD "Lower Emission School Bus Particulate Matter Retrofit Program." By decreasing local vehicle emissions, and more specifically, diesel particulate emissions, neighborhood exposure to some of the most hazardous components of air pollution can potentially be effectively mitigated. While we also support the PSA's suggestion that the program be expanded to other types of diesel vehicle fleets, we also believe the funding requested of the Applicant should be specifically targeted at vehicles that are based in or operate predominantly in Southeast San Francisco. The 125 school buses identified in the PSA operate throughout San Francisco and are not concentrated in the affected area. In addition, the operational life of the 1977 or newer model school buses that qualify to be retrofitted is significantly less than the forty-year permit to operate the proposed project. The duration of the school bus retrofit or similar program should at least be equal to the length of the permit to operate the proposed project. Other mobile sources of PM_{10} that are local to the

[7] The Commission's Final Decision regarding the AFC for the Otay Mesa Generating Project. Placed on line April 23, 2001. Page 125.

Southeast San Francisco should also be identified and targeted for the retrofit program. In addition, stationary sources within the area should be retrofitted to offset local PM_{10} violations.

13. Mitigation To Comply With LORS

The Maxwell Ordinance requires that the proposed project "reduce potential and actual emissions of criteria, toxic and hazardous air pollutants from levels that would occur in Southeast San Francisco without the construction and operation of the proposed fossil fuel electric generation project at Potrero Hill Power Plant. ... Emissions from the Hunters Point power plant shall be deemed to be zero, and the emissions from Potrero Units 4, 5 and 6 shall be calculated on the basis of actual historic annual emissions for each unit." (Maxwell Ordinance)

Under the Warren-Alquist Act and the CEC regulations, the CEC cannot approve the AFC unless the proposed project conforms to applicable state, local, or regional laws, ordinances, regulations, or standards (LORS), unless there are overriding considerations. (Public Resources Code Section 25523(d); Cal. Code Regs., Title 20, Section 1744; Public Resources Code 25525) The PSA must analyze the Maxwell Ordinance and determine the impact and the additional mitigation measures that may be required for the proposed project to comply with the Maxwell Ordinance.

Other mitigation programs that may enable the proposed project to conform to target diesel vehicle emissions and the requirements of the Maxwell Ordinance are:

1) funding for additional CNG fueling stations;

2) funding for electric vehicle charging stations in the neighborhoods;

3) funding to support conversion of MUNI buses to CNG, hybrid or electric vehicles that traverse through the neighborhoods; and

4) funding for conversion of other CCSF vehicles, such as Department of Public Works vehicles.

14. Monitoring Station

In addition to the other emission monitoring required by the CEC, the City requests that the Applicant fund the operation of an air monitoring station in the Southeast San Francisco to continuously monitor local air quality. The data from the monitoring station should be reported as agreed upon to San Francisco Department of Public Health and BAAMQD. The monitoring station should be installed and operational as soon as possible after certification. The first monitoring data can be used to establish baseline information. If in any year total emissions exceed the reductions achieved from local mitigation measures, then in the next year the emissions must be reduced either through improved technology or reduced power production.

B. AQUATIC BIOLOGY

There are a number of factors associated with the combined operation of Potrero Unit 3 and the proposed Unit 7 that have potentially significant impacts upon aquatic resources and which have not been adequately assessed in the PSA. These fall into the following major impact categories:

- Local and broader regional scales of water column thermal structure and circulation, re-suspension of sediments;
- Potential introduction of sediment laden contaminants;
- Changes in flux of organic matter to the seafloor;

- Mortality of fishes and invertebrates due to entrainment and impingement; and
- Cumulative impacts in association with other local perturbations upon receiving waters and sediments.

Each of the above impact categories is either inadequately addressed in the PSA or has not been addressed, due to a failure to recognize the potential impact. The Aquatic Biological Resources section of the PSA acknowledges the need for further information for a complete impact assessment and identifies specific data needs. CCSF will comment on these data gaps and existing sources of information that may augment the identified deficiencies. Recommendations are also made for additional information that would provide a more complete assessment of potential impacts.

1. Intake Withdrawal and Thermal Discharge of Bay Water

The PSA does not adequately consider the implications of the intake and discharge dynamics upon circulation and thermal structure of the receiving water environment and faunas and effects upon the planktonic organisms, fish and macro-invertebrate populations that are circulated through the system or impinged upon the intake screens.

Combined Unit 3 and the proposed Unit 7 will intake a volume of 453 million gallons per day (mgd) which represents a significant volume of water within the confines of the South-Central Bay and is equivalent to a daily intake of 1.72 million cubic meters, or a square-kilometer to a depth of nearly two meters. The intake has the potential to 1) alter local circulation patterns, 2) thermally load the receiving environment under certain hydrodynamic conditions, 3) alter normal deposition rates of detrital flux to the seafloor, and 4) contribute significantly to the mortality of entrained larval fish, invertebrate and planktonic populations. These processes need to be examined in the larger context of the South-Central Bay and perhaps the Bay as a whole. Utilizing data from the present intake vicinity to represent background conditions presents a potential bias, because these conditions may be influenced by the existing discharge of Unit 3 and other local perturbations to the receiving waters.

The PSA does not adequately acknowledge the relatively large volume of water that is withdrawn in relation to the circulatory dynamics of the South Bay. The volume of cooling water withdrawn from the Bay is non-trivial. Using the figure of 228 mgd intake volume for each of the generating units (Unit 3 and the proposed Unit 7), and assuming full operation for a year, the annual intake volume equals 1.507 x 106 acre-feet. This annual withdrawal of seawater equals 34% of the entire volume of the South Bay (*See*, Appendix 4: Calculations). Clearly this is a factor to be fully considered in examining regional influence of the power plant upon hydrodynamic processes and biological resources. This factor is not adequately examined in the PSA with respect to potential impacts upon the biota.

In providing a full assessment, a greater emphasis on the importance of physical processes that control biological constituents is needed for this vicinity of the Bay. The extent to which local and regional hydrodynamic processes are altered by the intake-discharge system has not been addressed. Thermal loading and changes to density stratification may be locally significant, particularly during periods of low circulation within this portion of the Bay. Each of these alterations may affect biological processes.

The intake-discharge process can be placed into a local hydrodynamic perspective. According to the description in the AFC, Section 8.2.2.2.1 (Water Resources), cooling water from existing Unit 3 and proposed Unit 7 will be discharged through four diffuser pipes, each extending approximately 700 feet from the shore, the outer 100 feet consisting of the diffuser section. The average depth along the diffuser lengths is approximately 3 meters (engineering drawings Project Description Figure 8). The daily intake volume will be withdrawn primarily from the region shoreward of these diffusers. To obtain a perspective on the daily intake volume, it can be equated

to the volume of water extending out to the diffuser terminuses, and extending both up and down coast for a distance of 1340 meters (a distance of 1.66 miles, see Appendix 4: Calculations). Two general outcomes are evident. A potential impact upon local, and even regional, water quality and plankton population dynamics is a finite possibility, and potentially significant re-entrainment probabilities exist which influence the thermal and circulatory characteristics of this coastal segment as pertinent to beneficial use assessments.

This perspective provides insight into the potential for restructuring of nearshore circulation and thermal loading. Undoubtedly there is a significant likelihood for re-entrainment of discharged water, particularly during periods of slack circulation and/or long resident times in this region of the Bay. In the summer when the water column is isohaline and density driven exchanges are minimal, residence times for water in the South Bay are on the order of months (Walters et al., 1985). Thus, a significant portion of the regional water mass may be subject to intake withdrawal. In a simple model, 34 per cent of the South Bay water volume passes through the power plant each year, with attendant mortalities and impacts upon organisms that are entrained or impinged and an increased thermal load in receiving waters.

2. Entrainment and Impingement Effects Upon South Bay Populations

The PSA's assessment that further information is needed regarding planktonic, fish and benthic invertebrate populations is warranted. The PSA does not, and cannot, make a full determination of population level impacts from the information available. However, it should be noted that localized single year sampling programs are in themselves inadequate in providing estimates for modeling of effects. Several studies in the Bay have emphasized that inter-annual variations may exceed seasonal variation, and periodic events (e.g., wet years) significantly influence population dynamics.

Estimating effects of entrainment and impingement at the population level is recognized as a difficult task. Other multi-year studies on power plant entrainment impacts have emphasized how, even when considerable sampling effort is expended, effects may be diluted so that population changes will be indistinguishable from natural variation. This is particularly the case in estuarine systems where seasonal and inter-annual levels of variation tend to be high. Where reliable estimates of entrainment mortality are available for ichthyoplankton and meroplankton (benthic invertebrates), an "equivalent adult losses" estimate method has been used to estimate losses in recruitment (*See* Horst 1975; Turnpenny 1988). Here, assumptions need to be made for the effects of biological compensation (i.e., increased survival at lower densities). For example, reductions between 1 and 10 per cent in the standing stocks of several midwater fish populations over the entire Southern California Bight were inferred due to entrainment of fish and larvae into the San Onofre Nuclear Generating Station. At the same time, it was acknowledged that changes of this magnitude, while significant, could not be measured by conventional sampling.

A similar situation is likely to exist for the South Bay, where effects may be substantial, but undiscovered, due to limited sampling and inadequate baseline information. Given the relatively small volume of the South Bay, and relatively lengthy residence times, impacts upon resident fish populations are a possibility, even if they cannot be measured from a conventional sampling approach. Similarly, impacts upon benthic invertebrates that have numerous larval phases and a lengthy planktonic existence (e.g., crabs) need to be modeled.

The statement in the PSA that "the entrainment losses also have a low potential consequence to the species populations, which are generally abundant and widely distributed" (PSA, page 8.2-14), is not an appropriate conclusion regarding potential impacts upon fish and macro-invertebrate populations. This is an unwarranted conclusion for the following reasons: 1) Several of the target species may be limited to the Bay environment or utilize the Bay as a nursery ground, 2) the conclusion that these earliest life stages are subject to high natural mortality and are therefore unlikely to be impacted by an additional source of mortality, even if significant, is not

supportable without specific life history information of the target species, and 3) the estimates of power plant induced mortality are unknown.

3. Entrainment and Impingement Mortality Estimates

The PSA does not provide estimates of potential mortality of entrained organisms and impinged organisms from Unit 3 and the proposed Unit 7 combined operation. Yet, a statement is presented (PSA page 8.2.-14) that even with doubled flow volumes, the projected reductions in entrainment losses with the use of finer mesh screens in the new units represents a beneficial impact. It is hard to envision how a significant increase in flow volume could translate into a beneficial impact.

The conclusion stated in the PSA appears to be based upon an assumption that with installation of finer mesh intake screens, there will be a reduced mortality from combined impingement and entrainment effects. Whereas the newly adopted fine intake screens limit the entrainment of organisms into the flow through system, they increase the rate of impingement on the intake screens. Only an unknown fraction of either entrained or impinged organisms is expected to survive. Therefore, the statement that concludes beneficial impact is without basis.

Studies from other power plants indicate that survival probability is likely to be low under either circumstance (entrainment or impingement), varying between species, and as a function of impingement retention times and entrainment factors. A recent summary of 45 coastal cooling system impacts upon fish populations in Great Britain concluded that nearly all impinged fish are killed, even when return systems have been installed, and also that few of the organisms passing through the screens survive after passing through the cooling system, due to the combined impacts of mechanical, temperature, pressure and biocidal exposure. Studies of southern California power plants have indicated nearly 100 per cent mortality for ichthyoplankton.

At this time, there is insufficient information regarding the target populations and potential impacts upon local and regional populations, particularly with respect to their individual life history dynamics, compensatory mechanisms, and risk probabilities of entrainment during larval, juvenile and adult phases. Based upon plant induced flow volumes in relation to the regional hydrodynamic processes, exchange rates and volume of the South Bay, impacts to regional populations of the most susceptible species are potentially significant.

4. Thermal Effects

The PSA states that the new combined discharge design will result in significantly decreased thermal impacts to the Bay (AFC Replacement page 8.14-21). As applicable to potential impacts upon aquatic biological resources, this statement is completely without justification. Whereas the new discharge design dissipates the thermal load to comply with Thermal Plan requirements (e.g., surface temperatures shall not exceed 4 degrees Fahrenheit above ambient), the actual thermal loading to the nearshore zone will be approximately doubled and average temperatures over an extended area will be significantly increased. Furthermore, the thermal model does not take into consideration that, under certain conditions, a substantial portion of the intake water may already have elevated temperature due to re-entrainment. This possibility is not accounted for, and may possibly result in a violation of the4 degrees Fahrenheit increase limitation as applied to unimpacted receiving waters. Without further information on the extent and impacts of the thermal plume, the statement that thermal effects of the proposed project would not contribute to cumulative impacts in the area (AFC Replacement page 8.14-23) is unwarranted.

5. Sediment Boundary Layer Processes

The PSA does not adequately address alteration of physical-chemical processes at the sediment boundary layer. Existing sediments consist of fine silt clays, and boundary layer processes are governed by typical wave and current dynamics. Physical factors associated with the

proposed Unit 7 construction and operation may alter the existing equilibrium dynamics of sediment deposition and resuspension, potentially altering the consistency of sediments in the near-field, with a possibility of mobilizing fine sediments from the seafloor and increasing turbidity within the water column.

The first of these physical factors associated with the proposed project is the significant volume of mid-column and bottom water that will be entrained and directed upward with the discharge waters. The discharge process, which has multiple discharge ports from four diffuser sections, is designed to dilute the thermal effects. In doing so, it will draw bottom water, which has relatively high levels of suspended particulate matter, toward the surface resulting in increased levels of particulate matter in the upper water column and surface waters. Fine-grained materials near the power plant discharge structure may become suspended by the discharge plume, resulting in localized increases in turbidity and a coarser-grained composition of sediments near the discharge. Turbidity plumes resulting from this process have been well documented for other coastal offshore discharges.

As a result of this discharge process, the sorting and resuspension of contaminated sediments needs to be considered (*See* discussion of Condition of Sediments below). The potential bottom water entrainment of discharged wastewater effluent particulates which are discharged approximately 1000 meters downcoast also needs to be considered (*See* discussion of Cumulative Impacts below).

A second physical factor that will influence the normal flow of bottom water will be the emplacement of the discharge pipes, each 54" in diameter, which extend above the seafloor over a substantial portion of the discharge lengths. These pipes would be aligned perpendicular to the predominant current flows and could change the sediment bedflow dynamics. There is a significant likelihood of an increase in bottom turbulence as water flows across the seafloor in the vicinities of these pipes. As a result, there would likely be a sorting out and resuspension of a portion of the existing fine sediments (silts, clays). The actual extent and magnitude of this process is a function of existing sediment properties, sediment cohesiveness, and boundary layer dynamics (current flows, wave dynamics). The altered seafloor processes would have the potential of introducing sediment contaminants into the water column.

6. Condition of Sediments

The issue of sediment contamination is not adequately addressed in the PSA. The PSA describes the highly contaminated condition of sediments that has been documented in the vicinity of the existing Potrero intake and discharge. Whereas the PSA acknowledges the presence of polyaromatic hydrocarbon (PAH) compounds in sediments (PSA, page 4.2–15), it draws no conclusions regarding potential impacts, pending additional sediment sampling. Subsequent core sampling conducted in July 2000 (URS-Dames & Moore, 2000) revealed significant levels of contamination by PAH compounds in shallow water sediments. These compounds, presumably derived from the disposal of coal tar from earlier power plant operations, were found at exceedingly high levels (up to 1 per cent sediment dry weight). PAH concentrations of this magnitude may be highly toxic to marine organisms. Introduction of contaminated sediments into the water column could occur during trenching for pipe laydown and other construction activities, from turbulent resuspension of sediments associated with the emplacement of discharge pipes on the seafloor, and from entrainment of finer sediments from bottom waters with discharge water.

The composition of the benthic infauna, sampled in December 2000 (PSA page 4.2-6), also provides evidence of degradation and organic loading of sediments. Such conditions may result from past deposition of coal tars and other industrial products on the seafloor. These conditions and their implications for future proposed offshore construction and operations have also not been adequately addressed in the PSA.

7. Altered Trophodynamics

There is also the possibility of an increase in flux of organic matter to the sediments resulting from the mortality and deposition of dead organisms that have passed through the cooling system or which have not survived the screen impingement-return system. These dead organisms are returned to the immediate vicinity of the intake/discharge and may result in increased organic deposition, and may also serve as a food source attracting predatory or omnivorous species. Altered trophodynamics of the intake-discharge area have not been adequately addressed in the PSA. Other marine outfall studies have noted the attractant properties of discharges to fish and macroinvertebrates that feed upon discharged organisms.

8. Cumulative Impacts

The PSA does not adequately treat potential cumulative impacts from other local and near-regional perturbations of the nearshore environment such as discharges from the Southeast Wastewater Treatment Plant (SWTP). SWTP discharges secondarily treated sewage into the Bay, approximately 810 feet offshore of Pier 80 at a depth of 42 feet, extending offshore about 230 feet upcoast of the Islais Creek entrance into the Bay. Historically, the SWTP has treated 110 mgd, with peak flows of 250 mgd during wet weather runoff. During this time, when overall treatment capacity is exceeded, sewer overflows into Islais Creek may occur.

Since the offshore SWTP discharge is approximately one kilometer from the proposed Unit 7 discharge pipes, and the daily Unit 7 intake volume is equivalent to a parcel extending out to the proposed diffuser depths and both up- and downcoast for a distance of 1340 meters, there is a good likelihood that discharged wastewaters may be entrained and directed toward the surface by the new diffuser system. This possibility is greatest during periods of tidal oscillation when waters are moving from south to north. This scenario, and potential impacts upon water quality, has not been addressed in the PSA.

In addition, broader regional considerations of combined influences of seawater withdrawal by Potrero and Hunters Point power plants should be assessed.

If the existing normal operation intake volume of 200 mgd for Hunters Point (S. Mooch, PG&E) is added to the Unit 3 and the proposed Unit 7 Potrero volume, the combined annual intake of these two plants then equals 49 per cent of the volume of the entire South Bay. The impact upon regional stocks of fishes and macro-invertebrates has not been assessed. An impact assessment could be developed through some sort of entrainment risk probability for the various species of concern, combined with assumptions regarding compensatory mechanisms and conversion to adult equivalent stocks. There is a significant possibility that impacts may be occurring that are beyond the detection levels of existing monitoring programs.

9. Marine Monitoring

The PSA does not adequately describe biological conditions in the receiving waters and sediments. Short-term monitoring to describe background conditions and potential biological resources at risk is not likely to provide an adequate assessment of potentially impacted populations. Inter-annual variability in biological populations may equal or exceed the levels of variation observed over the duration of any restricted sampling effort. A better biological description may be obtained by reviewing local and regional data over differing hydrographic/climatic conditions.

In several instances, the PSA makes statements that previous studies have shown no impacts upon biological resources. These studies have tended to be short-term and limited in scope. It should be recognized that the limited sampling efforts taken in studying the effects of the proposed project may be insufficient to detect impacts that exist. This is a common problem in marine environments in which population levels are subject to high levels of inter-annual and

seasonal variation. The PSA should give due consideration to this type of error that may be inherent in the available sets of marine monitoring data. The difficulty of detecting impacts is a function of this type of sampling error (Type II error). This type of error, simply stated, is the likelihood of concluding no effect, when in fact such an effect is occurring. It is a common problem to be dealt with in coastal impacts assessments. A more reasonable approach is to acknowledge that impacts (should they occur) may not be detectable without more rigorous sampling, rather than concluding that impacts do not exist.
(*See*, Appendix 4 for references to the Aquatic Biology section)

C. CULTURAL RESOURCES

1. Analysis of the Site By a Qualified Technology Consultant Is Required

The Cultural Resource Section of the PSA does not address the technological significance of the former manufactured gas electrical power generation operations at the site. The former operations at the site involved buildings, structures and equipment unfamiliar to most architectural historians. Analysis of the site by a qualified technology consultant who has expertise in the production of electricity from manufactured gas is necessary to supplement the Applicant's analysis of the site's history and architecture, as well as to determine significance, and therefore eligibility, of these resources for nomination to the National Register of Historic Places or the California Register of Historical Resources.

If a qualified technology expert determines that individual resources, or portions of the site are eligible for the National and/or California Registers, then specific additional measures should be developed in consultation with the San Francisco Landmarks Preservation Advisory Board, San Francisco Architectural Heritage and area residents to mitigate the loss of significant resources associated with the history and operation of the former power plant.

2. The Mitigation Proposed Is Not Adequate

The PSA requires that the Applicant mitigate the loss of the site's historical resources by preparing Historic American Engineering Record (HAER) level documentation and displaying information about the site in a public kiosk. These measures are not adequate to mitigate the loss of the site's significant resources. Likewise, relocation of these resources is not an appropriate mitigation, as it would compromise their setting, context and integrity. The CEC should require the Applicant to mitigate the loss of these resources by:

- Contributing financial resources to determine whether the site is eligible for registration as a historic district;
- Identifying and protecting neighboring historic structures in the Pier 70 area. The Pier 70 area shares the same historical context and significance as the power plant site prior to demolition.
- Recording, in accordance with HAER standards, as developed by the US Department of the Interior and the Library of Congress, the resources on the power plant site prior to demolition. The recorded information should include, but is not limited to, a building inventory; written architectural descriptions; architectural and engineering "as-built" drawings of extant interior and exterior features of the site structures and equipment; and large format interior and exterior photography. Upon acceptance of completed work, copies of the documents should be placed in local, and state repositories as well as filed and recorded with the Library of Congress.[8]

[8] Office of Historic Preservation, California Department of Parks & Recreation; City of San Francisco Public Library and College of Environmental Design, University of California. Berkeley.

- Consulting with San Francisco Architectural Heritage and other interested preservation organizations to develop a salvage component to any demolition plan in order to provide for the potential reuse of architectural elements and building materials.

The PSA does not refer to a cultural resource survey of the Central Waterfront currently being conducted by the San Francisco Landmarks Preservation Advisory Board (LPAB). The survey area includes the project site and is bound by the Bay on the East, Interstate 280 on the West, Islais Creek on the South and Mariposa Street on the North. The survey is funded in part by a grant from the National Park Service and is administered by the State Office of Historic Preservation (SHPO). The cultural resources portions of the AFC and PSA should be referred to the SHPO for review and comment on the significance of the site's resources and appropriate mitigation measures.

The AFC and PSA also do not discuss the role of the San Francisco Landmarks Preservation Advisory Board (LPAB), the City entity responsible for advising the San Francisco Planning Commission and Board of Supervisors on historic preservation matters in the proposed project. The LPAB is responsible for the implementation of the City's preservation Ordinance. (*See,* Article 10 of the San Francisco Planning Code) The LPAB is responsible for the identification, designation and on-going stewardship of the City's historical resources. The LPAB is also the public review body for historic preservation, supporting San Francisco's status as a Certified Local Government (CLG). The CLG status granted by the SHPO gives San Francisco greater participation in the administration of state and federal historic preservation programs. The LPAB comments on the nomination of properties for the National Register of Historic Places and Section 106 Reviews completed pursuant to the National Historic Preservation Act of 1966 by federal agencies.

The LPAB routinely comments on EIRs that address cultural resources located in San Francisco. In addition, the LPAB is consulted on the EIR mitigation measures related to the treatment of archeology, and is a part of on-going monitoring programs. The LPAB should be consulted about the proposed archeology treatment protocol contained in the PSA, and its participation in the monitoring of the archeology conditions should be requested. The Cultural Resources sections of the AFC and PSA should be referred to the LPAB for their review and comment on the adequacy of the analysis, the eligibility of the site and/or its structures for local landmark designation and mitigation measures that may be appropriate.

3. Demolition of the Meter House and Compressor House

The Meter House and Compressor House located on the Potrero Power Plant Site appear to be eligible for individual listing on the National Register of Historic Places[9] and are eligible for the California Register of Historical Resources. (PSA page 4.4-15) The Meter House and Compressor House are unreinforced masonry structures subject to San Francisco's Unreinforced Masonry Building Ordinance.[10] Under the Ordinance, the buildings must be reinforced or demolished. Because the buildings cannot be retrofitted for power plant use, they will be demolished. The demolition of the buildings is a significant effect that must be mitigated. A mitigation measure the CEC staff may consider is to require the Applicant to contribute to the seismic mitigation of Pier 70 historic resources, such as Buildings 104, 111 and 113.

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[9] Dames & Moore with Hill & Shoup, *Draft Historic Architecture Report, Station A, Potrero Power Plant in the City of San Francisco*, December 1999

[10] Ordinance No. 225-92, City of San Francisco

D. HAZARDOUS MATERIALS MANAGEMENT

1. The Proposed Project Will Be the Largest Hazardous Materials Storage Site in San Francisco

CCSF has been very successful in reducing the amount of hazardous materials stored in San Francisco and the number of facilities that require Risk Management Plans. The siting of this plant and the resultant storage of aqueous ammonia will make this facility the largest hazardous materials storage site in San Francisco. This is a significant impact that should be mitigated by the Applicant. Mitigation measures to consider include providing funds to support a community notification program and/or the San Francisco Fire Department Hazardous Materials Unit.

2. New Processes and Technologies May Eliminate the Need to Transport and Store Aqueous Ammonia

New processes and technologies are being developed that may eliminate the need to transport and storage ammonia. Two examples are Ammonia on Demand using urea pellets and the SCONOX system. If these technologies demonstrate their effectiveness, the Applicant should be required to implement these systems. Conversion to these systems at the proposed Unit 7 will be beneficial to the Potrero and Bayview communities and the Applicant. The benefits are that 1) a potential hazard to the community and workers would be eliminated; 2) the development and maintenance of a RMP would be eliminated; and 3) fewer deliveries of ammonia would be required. As a condition of certification, the Applicant should be required to convert to Ammonia on Demand, SCONOx or similar processes or technologies that eliminate the transport and storage of ammonia after two natural gas combined cycle power plants of 50 MW or more have been sited using such processes or technologies.

3. The Applicant Will Have to Prepare a Risk Management Program (RMP)

Although the PSA notes that a RMP must be prepared (PSA page 4.5-4), it does not require the Applicant to use the local guidance document available from the Department of Public Health. To correct this oversight, the following language should be added to page 4.5-4 of the PSA:

"The preparation of a Risk Management Program (RMP) takes approximately one year. The Hazardous Materials Unified Program Agency (HMUPA) of the San Francisco Department of Public Health administers the RMP program in San Francisco. A local guidance document is available and should be reviewed by the Applicant."

There are many important differences between the HMUPA program and the local guidance document, and the parameters discussed in the AFC and PSA. Any RMP prepared without following the local guidance document, will not be accepted by HMUPA. Several important differences between the AFC and the HMUPA local guidance document include:

1) The 75 ppm ammonia exposure criterion used in the AFC is not acceptable to CCSF. The City requires a level of concern of 35 ppm.

2) The Applicant will have to use the EPA RMP*COMP air modeling program, not the Screen 3 air dispersion modeling used in the AFC.

3) HMUPA may not accept the worst case tank release scenario used in the AFC and PSA. HMUPA is likely to require a worst case analysis that assumes the catastrophic failure or rupture of both the tank carrying the aqueous ammonia and the truck.

4) HMUPA may require RMPs for sodium hypochlorite and sulfuric acid.

5) HMUPA requires a seismic analysis as part of the RMP as well as a "seismic expert certification."

In addition, CCSF believes that the following statements in the PSA cannot be made until the RMP process has been completed:

- On PSA page 4.5-5 Terrain Characteristics: "...that offsite concentrations – even at elevated locations- would be so low as to pose no hazard to the public."
- On PSA page 4.5-7: "As proposed, the facility will cause no significant risk of off-site impacts. Thus the direct impacts of the project will not add to any existing accidental release risks."

Finally, to reach the project site, ammonia will have to be transported on very busy highways and densely populated streets with numerous houses, schools and businesses located along the route. The staff should review the delivery route alternatives with the San Francisco Fire Department, evaluate the safest delivery route and impose that route as a condition of certification.

E. LAND USE

The PSA does not adequately identify the numerous ways in which the proposed project relates to the San Francisco General Plan and the Planning Code. The PSA should include a much more comprehensive consideration of the San Francisco General Plan policies. Policies from the Commerce and Industry Element, the Transportation Element, the Air Quality Element, the Environmental Protection Element, and the Urban Design Element were omitted that are pertinent to the proposed project. In particular, a number of General Plan policies cite the importance of linking land use to transit. One of the most critical links is to encourage increased housing densities near transit. Insofar as a proposed project would discourage housing development in nearby areas, the proposed project could conflict with such policies, reducing the City's ability to encourage land use patterns which result in reduced reliance on the automobile. Although the proposed power plant site is in an industrially designated area (M-2), the City's policy is to encourage non-polluting industry.

1. Land Use Changes Are Not Adequately Addressed in the PSA

The land use impacts of the proposed project are underestimated because the PSA fails to analyze the extent of land use conflicts and how the project's expansion would contribute to increasing incompatibilities between land uses in the future. The PSA's Land Use section also does not make reference to the considerable land use changes that will be generated by Redevelopment Agency projects in the vicinity of the proposed power plant. Mission Bay, for example, will include 6200 units of housing. Redevelopment Agency plans for substantial expansions in housing and commercial development in the Bayview/Hunters Point area are also underway.

The PSA does not fully and adequately consider how construction of a new, expanded power plant conflicts with future, planned land uses in the area. The Better Neighborhoods 2002 planning effort, now underway, will include provisions intended to increase the population density in the Central Waterfront. However, the construction of the power plant will dedicate the site to intensified industrial use for at least another forty years, and may limit the possibilities for developing adjacent land uses for the same period. The possibility that the Central Waterfront , could become a new urban neighborhood is thus diminished by the continued presence and expansion of a power plant at the proposed location. Therefore, the proposed project could have a significant impact on housing demand in San Francisco by limiting the possibilities for construction of housing. Current San Francisco planning efforts stress the need to link land use to transit and to provide housing and neighborhood services in proximity to transit. The City's investment in 3rd Street Light Rail is being potentially compromised because the presence of the power plant could limit housing production where it is most appropriate - near transit.

The PSA fails to adequately acknowledge or address the substantial increases in housing and live/work units in the project vicinity over the past decade. The PSA also inaccurately portrays the project vicinity as almost exclusively industrial. The historic industrial character of the Central Waterfront is changing to a mixture of industrial, commercial and residential, live-work uses. The analysis of the proposed power plant expansion project impacts should recognize the diversity of uses in the area, especially the residential aspects of existing live-work developments in the immediate vicinity. In addition, the PSA, in both the Land Use section and the assessment of cumulative impacts in the Air Quality section, does not fully account for the extensive additional industrial development expected in the area which is identified in the Southern Waterfront Supplemental FEIR. Extensive mixed-use development is proceeding in nearby Mission Bay, but this is also not addressed in the PSA. Finally, the mention in the PSA, without analysis or evaluation of the impact, of the Better Neighborhoods Central Waterfront planning study, does not adequately convey its objective of resolving competition between industrial and residential uses in the project vicinity.

The CEC should require the Applicant to contribute to community efforts to enhance the livability of the affected neighborhoods by contributing resources to enhance and maintain existing public access and open space areas and to encourage less polluting means of transportation (such as the construction of bicycle lanes).

2. Construction Coordination Should be Required As A Condition of Certification

Both CCSF and PG&E are planning transmission additions in the same vicinity during the same general time frame. Coordination of this work is desirable not only to reduce costs and maximize electric reliability, but also to reduce the impacts of construction work on the surrounding community and environment. Such coordination should be required, not merely encouraged. The PSA encourages the Applicant to pursue "to the extent feasible" shared trenches or other collocation strategies. The PSA requires the Applicant to submit to the Compliance Project Manager (CPM) for review evidence of good faith efforts to collocate linear facilities. The Applicant should be required to submit this evidence to the CPM for review and *approval* and serve a copy of the filing on CCSF. To the extent that collocation is not achieved, the PSA requires the Applicant to coordinate with the City regarding construction under Islais Creek. The PSA requires the Applicant to submit to the CPM for review minutes of meetings with City Officials to verify coordination of transmission line boring under Islais Creek. The Applicant should be required to submit the minutes to the CPM submit for review and *approval* and serve a copy of the filing on CCSF.

3. Public Access to the Shoreline

The proposed power plant expansion does not include provision for public access to the open space and shoreline at or in close proximity to the site. Also, the PSA is incomplete in so far as it does not include a review or analysis by the Bay Conservation and Development Commission (BCDC) of the impact of the project on views of the Bay and public access and open space. The CEC should require the Applicant to amend the AFC to include a discussion of the issues and comments and mitigations proposed by BCDC. The McAteer-Petris Act requires that projects within one hundred foot shoreline band must provide "maximum feasible" public access to the Bay. If on site access is not improved because of potential conflict with power plant operations, off site mitigation is essential. CCSF reserves further comment until it has an opportunity to review and analyze the comments and proposed mitigations by BCDC.

4. Agreements With San Francisco Port

The PSA states that the Applicant must secure agreements with the San Francisco Port for the construction of the proposed intake and discharge structures which are partially on Port property, and that the Applicant currently has a lease for the fuel dock and pipeline. However, the

PSA does not state that an agreement with the Port is also required for the construction of the transmission line, portions of which would be located on Port property – on Illinois Street, near the proposed Islais Creek crossing and further south on Cargo Way. In addition, the PSA does not indicate that the Applicant has only a month to month lease with the Port for temporary use of the fuel dock and pipeline. The Applicant will be required to have a new agreement with the Port for long-term use of the fuel dock and pipeline. The PSA should be revised to accurately reflect the agreements and approvals required with the San Francisco Port prior to the construction of the proposed project and associated support structures, including the transmission line.

F. NOISE

Applicant Should Develop A Noise Control Plan

Although the proposed project noise level does not constitute a violation of the San Francisco Noise Ordinance (San Francisco Police Code, Art. 29, Section 2909), the construction activity necessary to expand the power plant will generate undesirable noise levels that will affect existing part or full-time residents, live/work dwellers and daytime populations that reside or work near the power plant.

The Applicant should be required to develop and implement a noise control program that would limit hours of construction and construction related activities to the business day (e.g., 8:00 a.m. to 5:30 p.m. excluding weekends) and establish operational standards and physical improvements to reduce the noise levels at and emulating from the proposed site.

G. PUBLIC HEALTH

1. Non-Cancer Impacts Are Underestimated

In assessing the risks of non-cancer effects, the PSA considers only non-criteria pollutants and calculates a maximum chronic hazard index of 0.1415 and an acute hazard index of 0.5141. This methodology ignores the well-documented effects of criteria air pollutants below current state standards. In a letter to the EPA in 1997, BAAMQD stated, "We are concerned that the overall stringency, considering both level and form of the proposed PM standards, is not adequate to eliminate all health impacts, or even all premature deaths – our analysis shows that a large number of premature deaths would still occur in the San Francisco Bay Area, even under attainment of the new standards. ..., According to our analysis, a reduction in the proposed 24 hour standard from 50 ug/m^3 to 30 ug/m^3 would result in a reduction of as many as 1,300 deaths per year in the Bay Area.[11] Another recent evaluation of the health burdens of particulate air pollution estimated the costs of PM_{10} on cardio-respiratory mortality, cardiac and respiratory hospitalizations, bronchitis exacerbation's, asthma attacks and sick days, and used a PM_{10} level of 7.5 micrograms per cubic meter as a threshold of no effect level.[12] Incorporation of criteria air pollutants and their health effects into the risk assessment methods would likely result in hazard indices exceeding 1.0. The revised PSA and the FSA should make explicit the health-based reasons why PM_{10} mitigation is necessary.

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[11] Letter from Ellen Garvey, Air Pollution Control Officer, to Carol Browner, EPA Administrator, March 7, 1997.

[12] Kunzli, N. "Public Health Impact of Outdoor and Traffic Related Air Pollution: A European Assessment," *Lancet*, Volume 356, Sept 5, 2000, pages 795-801.

2. The PSA does not assess the public health impacts of $PM_{2.5}$ and therefore the CEC has not satisfied its obligation under CEQA

PM 2.5 is of particular concern because of its health impacts. Those health effects include a range of problems from aggravated asthma in children to premature death, especially for elderly people. Although the federal PM 2.5 standard established by the EPA in 1997 is not in effect pending court review, the public health concerns that caused EPA to set the standard remain. (For further discussion and proposed mitigations, see CCSF comments in the Air Quality Section above.)

H. SOCIOECONOMIC RESOURCES

The PSA does not adequately analyze or address the issue of environmental justice for the communities in closest proximity to the proposed project. The Southeast sector of San Francisco, which includes the Central Waterfront, Bayview Hunters' Point, Dogpatch, and Potrero Hill neighborhoods, will receive the primary social and environmental impacts from the proposed power plant expansion. The Maxwell Ordinance recognizes that Southeast San Francisco has a disproportionate number of industrial and polluting facilities, including both the Hunters' Point and Potrero Power Plants. In California, the statewide asthma hospital discharge rate is an unacceptably high 216 per 100,000 children. The rates for African-American children in the four most populous counties in the Bay Area, Santa Clara, Alameda, Contra Costa, and San Francisco counties, soar almost ten-fold to 2036, 1578, 1099 and 361 respectively. CCSF believes that there is a strong link between industrial uses and the extraordinarily high rates of childhood asthma and other serious respiratory diseases among residents of Southeast San Francisco. Therefore, all negative impacts relating to the expansion of the power plant must be fully identified, analyzed, and mitigated to ensure that no further harm is done to the physical and social environment of Southeast San Francisco.

Socioeconomic Resources and Environmental Justice Issues Are Not Adequately Addressed in the PSA

The socioeconomic and environmental justice impacts are grossly underestimated in the PSA because there is no substantive analysis of the communities most directly and acutely impacted by the proposed expansion. As stated in the PSA, Executive Order 12898, federal and state agencies (receiving federal funds) "are required to identify and address any disproportionately high and adverse human health or environmental effects... on minority and/or low-income populations" (PSA page 4.9-1). Socioeconomic Table 3 analyzes the minority populations within a 1, 2, 4 and 6 mile radii of the plant. The Table indicates that throughout the entire six-mile study area, the minority population remains slightly above 50 per cent. Further, the data indicates that within a 2-mile radius of the plant, the minority population exceeds 80 per cent. Although the data reflects, and the staff acknowledges a significant minority population within Southeast San Francisco, the PSA does not provide a demographic characterization and impact analysis of these local communities. Also, although the PSA does acknowledge that currently there is no standard upon which to define the study boundaries of an "affected area," the PSA fails to explain why the CEC staff has determined the six-mile study area to be appropriate. CCSF believes that expanding the study area to a six-mile radius distorts the true impact of the proposed project on the residents Southeast San Francisco.
The PSA analyzes the proposed project's potential insignificant impact on the surrounding job market, housing availability, schools and medical services. However, the PSA fails to analyze or incorporate existing data regarding the potentially significant impacts this project will have on the environmental quality and public health of the established environmental justice populations of Southeast San Francisco.

The cumulative impact analysis of commercial and residential development projects does not examine the size and impact of all current and reasonably anticipated projects within Southeast San Francisco. For example, the PSA acknowledges that 20 per cent of the City's live/work units

are located in the Central Waterfront area and that eighteen additional applications are currently under review, but there is no indication of how many units are proposed for development.

Further, this section of the PSA does not discuss the planning efforts currently underway to increase development along the Central Waterfront. In addition, the cumulative impact analysis does not mention the redevelopment of the Hunters Point Naval Shipyard, the Port's proposed Illinois Street Rail-Truck Bridge, as well as the developments included in the Port's Southern Waterfront Supplemental Environmental Impact Report. This EIR included analysis of a variety of development activities on Port property including the redevelopment of the western portion of Pier 70 and the potential for six new industrial leases. If approved these leases would result in the relocation, or expansion of existing uses, as well as the siting of new industrial uses on Port property.

The sections relating to employment characteristics and local businesses do not provide adequate analysis of the local environmental justice population. While the employment "setting" analysis identifies that the South Bayshore area is "still in need of additional jobs and economic base" (PSA page 4.9-4), the employment "impacts" analysis focuses solely on Bay Area-wide employment availability. The PSA does not discuss the feasibility of using a more local labor force in any substantive way.

The sections relating to schools also fail to provide adequate analysis of the local environmental justice population. The schools "setting" analysis identifies four schools within one-mile of the project site (two of which are elementary schools within three-quarters of a mile of the Potrero Plant). However, there is no demographic characterization or any related analysis of the socioeconomic status or ethnic makeup of these school children. In addition, the PSA does not analyze or reference any existing studies done on the health-related impacts this proposed project might have on this population. Without this information, the true impacts of the proposed expansion on the local school-age population cannot be assessed.

Overall, the PSA recognizes that an environmental justice population exists within the study area. However, the PSA fails to acknowledge, incorporate, and recommend mitigations based on environmental justice throughout the PSA. The PSA at page 4.9-9 identifies the areas of air quality, public health, noise, water quality, traffic, and visual resources as having a direct relationship to environmental justice. But nowhere in the analysis of air quality, public health, noise, water quality, traffic, and visual resources is the issue of environmental justice addressed.

Finally, the "mitigation" analysis of the socioeconomic resources/environmental justice section focuses on ways to reduce the construction impacts on local businesses. While this is a necessary component of any approval, CCSF believes that to mitigate socioeconomic and environmental injustice, the CEC should require the Applicant to engage and include the local community as a stakeholder in the development, construction, and operation of the proposed project.

Mitigations which the CEC staff should consider, include, but are not limited to:

- Hiring some agreed upon percentage of construction workers from the Potrero/Bayview/Dogpatch communities. If the agreed upon goal is not attainable the Applicant should commit to fund job/apprenticeship training program(s) for Southeast San Francisco residents;

- Funding a study of causes of the high rates of childhood asthma and other serious respiratory diseases in Southeast San Francisco;

- To the extent possible, purchasing supplies and equipment locally;

- Holding two more environmental justice workshops that include discussions of air quality, public health, water quality, and land use issues;

- Retrofitting trucks owned by local truckers;
- Establishing a fund to teach school children in Southeast San Francisco about environmental justice issues.

I. TRAFFIC AND TRANSPORTATION

1. Construction Will Have A Significant Impact on Traffic

Construction of the proposed project will have a significant impact on traffic and will increase traffic congestion in the area, disrupt existing businesses and conflict with the construction of the MUNI Metro Third Street Light Rail, the Metro East MUNI Maintenance Facility, the Illinois Street Rail-Truck Bridge and the development of the Pier 70 Mixed Use Opportunity Area. For example, the Third Street Light Rail project will eliminate one traffic lane in each direction along Third Street.

CCSF agrees with the PSA condition of certification TRANS-5 that the Applicant be required to develop and implement a transportation plan. However, the condition should include the requirement that any necessary transportation infrastructure improvements, such as repaving, signalization and signage, be included in the plan. Moreover, the Applicant must be required to develop the transportation plan in conjunction with the San Francisco Port, MUNI, and the Department of Parking & Traffic.

2. Plant Operations Impacts on Traffic

In its discussion of the impacts of the power plant's operational phase, the PSA demonstrates little familiarity with area traffic circulation. Truck access to the proposed project site via Cesar Chavez Street from US 101 is difficult. Direct access to eastbound Cesar Chavez Street from US 101 is impaired because of limitations in this freeway interchange. Trucks travelling to the power plant must travel on a very busy highway and through densely populated streets with numerous houses, schools and businesses located along the route. The staff should evaluate the safest delivery route and impose that route as a condition of certification.

3. Coordination With City Projects

The PSA also requires the Applicant to coordinate the construction of the linear facilities with the MUNI Third Street Light Rail Project and the City's Illinois Street Rail-Truck Bridge. The PSA requires the Applicant to submit a construction plan to the CPM for review and approval and to the City for review and comment at least 30 days prior to the start of demolition. If the Applicant submits a traffic control plan which has not been approved by the City, 30 days will not be sufficient time for the CPM to review, approve and implement a contested plan. If the CEC requires post-certification procedures to determine the feasibility of collocation, submission of collocation documents identified in the Land Use section of the PSA should precede submission of the traffic control plan. As currently written, the traffic control plan would be submitted 30 days prior to the commencement of demolition and the collocation documents would thereafter be submitted 30 days prior to the commencement of construction. The Applicant should be required to coordinate with the City well in advance of construction so that changes can be adopted if necessary.

J. TRANSMISSION LINE SAFETY AND NUISANCE

The PSA at page 4.11-11, does not recommend validation measurements for the underground transmission lines. In the AFC, the Applicant calculated the EMF levels above the transmission lines as 120 milligauss. This level is much higher than the ambient levels of 0.5-1.5

milligauss in San Francisco.[13] The PSA should require that EMF measurements be taken at several sites above the transmission line to determine exposures to people who may walk over the line.

The analysis and evaluation of this section are dependent upon the assumptions that are made concerning how the plant will ultimately be interconnected. Therefore, any deficiencies in the analysis of the Transmission System Engineering section apply to this section. For example, page 4.11-10 of the PSA states, " the Applicant calculated a maximum field strength of 1.46 kV/m for the area around the line. This would diminish to 0.71 kV/m at the Potrero PP property boundary and 0.005 kV/m at the nearest resident 250 feet away." These calculations of maximum electric and magnetic field exposure may change if the proposed interconnection arrangement is modified based upon the results of the Detailed Facility Study. CCSF reserves the right to comment further on whether EMF validation should be required after the Detailed Facility Study is complete.

K. VISUAL RESOURCES

1. The Proposed Project Has A Significant Impact on Bay Views

The proposed project and smokestacks would impact views of the Bay and views from the Bay, by creating highly visible structures in the view shed of the surrounding residential communities of Dogpatch, Potrero Hill and Bayview/Hunters Point. The proposed power plant and smokestacks would be visible from sensitive viewing areas such as Warm Water Cove and Agua Vista Park that are an important part of the open space and public access network in the area.

As discussed in CCSF's Land Use comments, the PSA is incomplete in so far as it does not include a review or analysis by the Bay Conservation and Development Commission (BCDC) of the impact of the project on views of the Bay and public access and open space. CCSF reserves further comment until it has an opportunity to review and analyze the comments and proposed mitigations by BCDC.

2. The Applicant should contribute to the development and implementation of streetscape improvements

The Applicant should contribute to the development and implementation of a plan for urban design/streetscape improvements and treatments that would help buffer the proposed power plant from other incompatible land uses in close proximity to the project and the Southern Waterfront. This plan could include the undergrounding of existing utility lines in the Potrero Hill, Dogpatch and Bayview areas.

The PSA should require the Applicant to undertake an urban forestry or similar landscape improvement project throughout the Dogpatch neighborhood, Pier 70 area and Southern Waterfront. Proposed mitigation measure VIS-5 should be expanded to indicate that streetscaping should also be designed to engender a comfortable pedestrian approach to the 23rd Street terminus at the Bay. The Applicant should provide landscaping (for instance, benches and trees) at the terminus of 23rd and the Bay that creates a destination for workers and visitors to the area and provides access to the Bay. To the extent possible, this new open space should be connected to Warm Water Cove and linked to the Bay Trail.

Nighttime illumination of the power plant will increase the backscatter to the sky. The Applicant should, in consultation with community representatives and neighboring property owners, develop and implement a lighting plan to minimize the trespass of unwanted glare visible from residential areas.

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[13] This data was supplied by Richard Lee, San Francisco Public Health Department, Environmental Health, 1390 Market Street, Suite 210, San Francisco, CA 94102

L WASTE MANAGEMENT

The PSA Should Recognize And Reference The Ongoing Remediation At The Potrero Site

The Regional Water Quality Control Board (RWQCB) is the lead regulatory agency overseeing PG&E's environmental remediation of the Potrero site. The RWQCB's requirements and schedule for remediation should be incorporated into the PSA. The Applicant should coordinate the proposed project construction with ongoing and planned remediation of the project site. CCSF reserves further comment until such time as more information, data and analyses are available on the impact of the proposed project on the required remediation of the site.

M. WATER AND SOILS

1. There Is Insufficient Data or Analyses To Understand the Water Quality Impacts of the Proposed Project

The PSA does not provide sufficient details or analysis to understand the water quality impacts of the proposed project. Consequently, it is not possible to assess alternatives or evaluate mitigation measures. It is essential that impacts on biota due to entrainment and impingement in the cooling cycle and also impacts from the thermal plume be assessed and mitigation identified prior to project certification. The proposal to assess impacts post construction is not acceptable and contrary to the intent of CEQA. In addition, because of the lack of information on impacts, CCSF can not identify and discuss cumulative impacts or appropriate mitigation measures necessary to eliminate significant environmental effects as required by the Warren-Alquist Act.

The PSA is separated into specific areas of concern which have precluded discussion of cross-media impacts. For example, impacts of combustion byproducts, if any, on water quality are not discussed. One of the most significant impacts of any new facility which burns fossil fuels is the impact on the global carbon cycle and global warming. The recently completed Climate Change 2001: Third Assessment Report, developed under the auspices of the United Nations, has concluded that impacts of global warming will be more significant than those predicted during the last assessment five years ago. These impacts are directly related to San Francisco concerns and issues including sea level rise and long-term water supply. Unfortunately, the document does not address these issues at all.

2. Overall Summary

In general, the PSA's discussion of water quality impacts and the regulatory framework for water quality regulation are weak. As discussed in the following comments, the lack of information on expected impacts in two key areas (entrainment and thermal) means that appropriate mitigation measures cannot be identified.

The PSA includes no information on impacts related to pollutants listed as causing impairment in San Francisco Bay (Clean Water Act 303(d) list).

The discussion of water quality issues in the Aquatic Biology section of the PSA appears to have been written independently of the Soil and Water section. The discussion of water quality in these two sections needs better integration or possibly consolidation into one section. At a minimum, each section should include references indicating where related material is addressed in the other section.

The PSA correctly identifies requirements and actions that will address the short-term construction related impacts. Construction related effects (PSA page 4.2-12) to the area are estimated to have little long term impact overall to sessile benthic organisms. A total of 0.25 acres

of inter-tidal and sub-tidal habitat will be lost due to the construction of new intake structures. It is expected that locations where Bay sediment is dredged will return to ambient conditions once the dredging is stopped and sedimentation processes reoccur. Construction of the heated water outfall and diffuser section will replace 3.5 acres of soft bottom habitat by a hard-bottomed gravel mattress used to anchor the outfall. This substrate will support different infaunal organisms initially, but over time sedimentation processes will probably return this area to soft bottom substrate.

3. Issues not addressed in the PSA

a. Cooling water discharge; ongoing thermal effects

Modeling of thermal effects of the discharge of Unit 3 and the proposed Unit 7 is necessary to estimate environmental effects. Without knowledge of the total flow of the discharge and the estimated temperature change, the effects on fish migration and spawning (Pacific Herring in particular) and the effects on benthic habitat are impossible to predict. No modeling information was presented in the PSA. This issue is discussed further in the section below: Issues not adequately addressed in the PSA.

b. Impacts due to entrainment or impingement of biota

Larger biota will impinge on the screens intended to keep these organisms from being drawn into the cooling system. Although designed to minimize mortality to the trapped organisms, some die-off will occur. The PSA should quantify the impacts, to the extent possible, based on experience elsewhere.

Organisms, including juvenile forms, which pass through the screens and enter the cooling system will be subjected to elevated temperature. Most of these organisms will die. Although discussed in the PSA, no estimates are provided for the mortality rates or for the expected impacts on the biology of the area. This is wholly unsatisfactory. More detailed comments on entrainment/impingement issues are included below in Issues not adequately addressed in the PSA.

c. The PSA does not appear to address issues related to certain regulatory constraints

The PSA does not appear to address issues related to certain regulatory constraints, such as the "impaired waterways" as listed under Clean Water Act 303(d). In addition, the status or applicability of stormwater permits for industrial sources as applied to this site is unclear (i.e., not just the general construction storm water permit).

d. The PSA does not address cross-media issues such as dioxin generation and fallout or water quality implications from other air pollutants (dry and wet particulate fallout leading to watershed acidification

Dioxins are created by combustion. Air emissions are a major source of dioxins and furans which subsequently become a water quality problem (San Francisco Bay is "303(d) listed" under the Clean Water Act as impaired due to the presence of dioxins and furans).

e. Circulation patterns

Impacts of discharge on currents and circulation patterns are not discussed.
As noted herein, the implications from the release of additional CO_2 on global warming are not addressed.

4. Issues not adequately addressed in the PSA

a. Aquatic Biology and Soil and Water Resources: Section Coordination

It is not clear why some topics are addressed in one section and not in others. These comments address items which are not in either section or are inadequately discussed. In general, it would be helpful if the two sections: Aquatic Biology and Soil and Water Resources would refer to each other because it is not clear which section should appropriately address some items.

b. Ongoing thermal impacts

Although the discharge structures are being moved into deeper water (and thereby into an area of larger tidal flows), the change in ambient temperature estimated in the document still exceeds the California Thermal Plan limits. CEC staff suggests the Applicant apply for a waiver from the CTP restrictions. Previous studies indicate the thermal plume rises to the surface. Before completion of the environmental documentation and before any waivers are granted, the Applicant must provide a thermal plume model for the proposed structure to calculate the area of impact. The impacts of such a large temperature change to the surrounding fauna is currently unknown and must be described prior to project initiation. Because the area is used by many important species (herring, Dungeness crab, pelagic cormorants) an evaluation of the thermal impacts is essential. The water plume may also create a zone of avoidance which may impact fish and crab migration routes.

c. Impingement (PSA page 4.2-17)

Impingement of fish at the new intake structure is expected to be minimized by the use of new technology to limit the approach velocity to less than 0.4 ft/sec. The size, however, of the mesh opening of the traveling screen will be smaller [5/32 in.] than that used previously [3/8 in.] increasing the potential for smaller organisms (juvenile fish and small invertebrates) to be impinged. Impingement data based on studies conducted previously may underestimate the abundance of organisms vulnerable to this process. These studies should be reassessed to estimate new impingement rates and impacts. (On the positive side smaller screen mesh may also limit the abundance of entrained organisms passing through the cooling water system.)

Studies that demonstrate that these new impingement technologies are superior are not included. Survival estimates for smaller marine organisms expected to be impinged needs to be developed to evaluate this process. How this technology affects important species such as Dungeness crab especially considering their increased abundance in the study area needs to be resolved. Survival studies that have been conducted at typical intake velocities with this species or other crab species need to be reviewed.

d. Entrainment impacts (PSA page 4.2-18)

Entrainment impacts are not addressed in adequate detail. Entrainment losses described in previous studies conducted in 1978-79 and the impact of these losses on local fish and invertebrate populations are not discussed in the PSA. This is a significant shortcoming of the PSA.

Studies are recommended to determine the icthyoplankton population over one year in the area of the intake. These studies will be completed in January 2002 and will reveal the seasonal variation in the distribution and abundance of local species. Once these studies are complete an environmental assessment will be made to determine the effect of entrainment on these populations. The mortality of entrained organisms passing through the cooling system was estimated to be 25 per cent from previous studies. Using this data and assuming the same level of mortality occurs a rough estimate of entrainment impact on the marine community can be prepared. Given specific information on the temperature rise, duration and pressure changes that will occur in the once-through cooling system of the proposed project, a model of entrainment mortality can be created to estimate impacts.

The PSA currently identifies ichthyoplankton entrainment studies which will be undertaken after construction. This is not appropriate. Although the information produced may be interesting, there is no assurance that the data will result in mitigation measures that satisfactorily reduce impacts. Once construction is complete, many opportunities for mitigation or implementation of alternatives are lost.

e. Species identification

The PSA indicates that mitigation will be required for impacts to one or more species of fish or commercially important species of crab or shrimp. It is very likely that larvae of the above mentioned commercially important species of invertebrates and fish may be entrained in the daily process of the facility, and adults of those species will be impinged. Because entrainment identifications may be difficult, the PSA should use identifications to family or higher level when evaluating impacts to commercially important species. All unidentified larvae of fish, shrimp or crabs should also be added to the impact pool. As discussed in the comments on mitigation measures, impacts on non-commercial species are relevant to overall impacts on the environment and need to be addressed (and mitigated).

f. Intermittent Heat Treatment

The document proposes that heat treatment may be undertaken up to twice per month to minimize fouling of the intake structures. It is not clear from the document what the temperature of the system water rises to during the heat treatment, but the increase must be substantial to thermally shock the colonizing organisms. That very high temperature water is then mixed with more intake water and discharged out the deep-water outfall. There is no indication what the thermal change is during those periods when heat treatment has occurred. This impact needs to be characterized. Although the discharge will be in deeper water, a blast of heated water twice per month could have severe impacts on local infauna as well as plankton and fish passing in the vicinity of the discharge. Additionally, the ongoing thermal plume at the Hunter's Point power plant acts as an attractant during the winter. It is likely the Potrero thermal plume will also attract fish and there may be more offshore and shoreline fishing activity in the future.

g. Post-construction studies of entrainment impacts

The PSA indicates the project will conduct a full year of ichthyoplankton entrainment studies but does not mention zooplankton entrainment, which must also be evaluated. A significant reduction in the survival of larval Dungeness crab could impact an already struggling fishery, although it may be unlikely that the larval component in the vicinity of this power plant will have substantial impact to the population.

h. Post-construction studies of impingement impacts

The PSA indicates that fish impingement will be monitored monthly but does not mention invertebrate entrainment which is also important. Studies conducted in 1978-1979 indicated large numbers of Crangon spp. impinged, and the document mentions the potential of impact to the South Bay shrimp fishery. Also, the increased numbers of Dungeness crab collected in recent trawl surveys provide an indication that those organisms may also be impinged, potentially leading to an adverse impact on the Dungeness crab fishery.

i. Chemical Impacts

The procedures used for the chemical treatment of the intake structures to minimize fouling (sodium hypochlorite and sodium thiosulfate) are not adequately described. The discharge site should be equipped with a continuous chlorine monitor to evaluate complete neutralization of the hypochlorite before discharge. Such continuous monitoring probes require diligent preventive maintenance to ensure correct operation. In addition, some years ago, a study on

chlorinated/dechlorinated wastewater treatment plant effluent found sublethal adverse effects on juvenile crabs. Would such impacts potential result from the chlorinated/dechlorinated flows resulting from the plant's chemical treatments?

j. Stormwater Flows

In the section on Terrestrial Biology there is a discussion of stormwater. On page 4.3-7 of the PSA it states that storm water flows from the proposed Unit 7 area will use the existing surface water drainage system, which will convey flows to the existing outfall to San Francisco Bay and the existing San Francisco City sewer system. The storm water situation should be discussed in the Water Section and needs more detail. Apparently no new stormwater will be generated because the impervious area will remain the same. It should be noted that stormwater and other runoff also results from pervious areas if the rainfall is intense or if over-watering occurs. If a new or increased stormwater discharge is planned, then this discharge may be a "new source" as defined at 40 CFR 122.2 and subject to stormwater permitting requirements (General Industrial Permit). A Report of Waste Discharge is required 120 days prior to making a material change in the location or volume of discharge. Of particular concern are those storm water pollutants which are listed as causing impairment in the Bay (dioxin, diazinon, copper, PCBs, etc.).

k. Clean Water Act description (PSA page. 4.2-2)

It is not clear that the outfall is allowed under one of the existing Nationwide 404 permits. The Applicant may need to apply for an individual 404 permit. This section should also mention the requirement for a 401 certification of compliance with water quality standards. It is not correct to say the effluent is authorized by Section 402; this section should describe the requirements to submit an application and go through the permitting process. The permit will apply to the heated water discharged through the outfall. In addition, the same or another permit will address the stormwater runoff from the site (unless it is discharged into the city's combined sewer system in which case it must adhere to the certain municipal pollution prevention requirements)

l. California Water Code

Under "State" (PSA page 4.2-2 to 4.2-3), the PSA needs to discuss the California Water Code, which provides for concurrent waste discharge requirements (WDR), along with the NPDES permit. Under "State," the PSA should (1) note water quality standards and the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan). (*See* further discussion below); and (2) describe 401 certification requirements (which have recently been modified by the State).

m. Under "Local" San Francisco pollution prevention program should be addressed (PSA page. 4.2-4)

The San Francisco pollution prevention program requirements include preventing pollutants of concern from being entrained by runoff or from otherwise entering the sewer system). Any industrial-type wastes discharged to the sewer system must meet the requirements of the San Francisco pretreatment ordinance. (*See,* San Francisco Public Works Code, Article 4.1 ("Industrial Waste))

n. Cooling Water Discharge (PSA page. 4.2-17)

Nickel and copper are slightly elevated in the existing discharge and are likely introduced through corrosion of the piping. The new discharge will possibly have increased levels. The Central Bay is listed (303(d)) as impaired by copper. EPA's policy is that no new mass of listed

constituents may be introduced into impaired waters. Either treatment (to zero increased discharge) or offsets are required.[14]

o. Compliance with Laws (PSA page. 4.2-22)

This discussion appears to neglect the Clean Water Act 402 (1) (NPDES) effluent (and industrial stormwater). requirements; (2) the permitting policy for impaired waters; (3) Clean Water Act 401 WQS certification process; (4) San Francisco's pollution prevention and pretreatment program, and (5) the State's Thermal Plan. The PSA should indicate why no industrial stormwater permit is required (Industrial Activities Storm Water Permit). Did the Applicant submit a "No Exposure Certification" or is stormwater addressed in the Applicant's NPDES permit? The fact that some stormwater is directed to oil/water separators prior to discharge to the sewer system indicates that some exposure occurs. The discussion should indicate the procedures to ensure that the stormwater discharged to the Bay is not exposed to potential contaminates.

The CEC staff recommends that a dewatering disposal plan be prepared and approved prior to initiation of construction. One disposal option discussed for dewatered groundwater is to discharge into the municipal sewerage system. The CCSF Bureau of Environmental Regulation and Management (BERM) issues batch wastewater permits for such discharges. BERM requires that permit applications for batch wastewater discharges be submitted no later than 45 days prior to the proposed commencement of the discharge.

The CEC staff also directs the Applicant's attention to the need to submit an application for an Industrial Wastewater Discharge Permit. BERM requires that the application for an Industrial Wastewater Discharge Permit be submitted no later than 90 days prior to the proposed commencement of the wastewater discharges.

p. Technical or interpretation errors in the PSA

(i.) Table 1, page 4.2-6: The species Eudorella pacifica belongs to the phylum Arthropoda.

(ii.) Last paragraph page 4.2-6: The genus name for English sole has changed to Pleuronecthes.

(iii.) Page 4.2-6, 7: In addition to Dungeness crab (Cancer magister), species collected in the preliminary studies which should be considered of commercial importance include English sole (Pleuronecthes vetulis), Pacific herring (Clupea harengus), speckled sandabs (Citharichtys stigmaeus), and crangonid shrimp.

E. Comments on Mitigations proposed in the PSA

1. Construction Impacts on Fisheries

The Applicant's and Staff's proposed mitigation measures include utilization of a qualified biologist during the Pacific herring spawning season (December – March) to determine if construction activities are having an impact on Pacific herring spawning behavior.

It is likely that any in-water construction activities that occur just prior to or during the spawning season will act to deter fish from entering the area. Pacific herring tend to avoid areas of recent construction. Although fish may be spawning in adjacent areas or other parts of the Bay, an

[14] There is an effort underway to de-list copper, however, this process will likely not be complete for several years.

absence of spawning activity in the project site may be due to construction activities. A more protective approach for the herring fishery which should be considered and discussed in the PSA would be to suspend in-water construction during the spawning season (December – March). The project should retain a qualified biologist to determine if fish are using the area to spawn. Construction may be allowed to resume if there is no use of the area, and with the approval of California Department of Fish and Game or other affected agencies.

It should be noted that the choice of spawning areas is sporadic and cannot be predicted using previous years' data. The fact that 2001 spawning occurred in Richardson Bay does not preclude there will be no spawning in the area of construction for the proposed project in 2002.

2. Loss of Bay Habitat

The Staff's proposed mitigation measures include restoration or creation of Bay habitat to offset loss of habitat due to Bay filling. Presumably this restoration or creation would take place as required by the Clean Water Act Section 404 permit to be issued by the Corps of Engineers for the project. Recently, a panel convened by the National Academy of Sciences found serious shortcomings in the Corps implementation of compensatory mitigation for wetland losses. For example, many projects were not completed or did not function as required. Consequently, it is not adequate to refer to the 404 permit as necessarily providing adequate mitigation for loss of Bay habitat. The PSA needs to refer to controls, including oversight that will ensure that the compensatory mitigation actually performs as intended and provides the required mitigation. The PSA should indicate if productivity studies will be used to determine the success of the restored habitat, or if not, what measure will be taken.

3. Impingement mitigation (maintenance and net replacement)

The CEC staff recommends a net barrier to prevent impingement of fish on the plant's screens. These are only effective if well maintained, as they tend to get fouled with floating debris. The PSA should include a requirement for scheduled maintenance and replacement of these nets. The PSA should also indicate what manual procedures or alternative procedures will be implemented if the continuously rotating inclined screen design and/or the low-pressure spray wash fails to perform as intended.

4. Heat treatment

Operational activities during heat treatment should be monitored by resident biologists. Heat treatment should be suspended during Pacific herring spawning season and known migration movement of other species. Although herring spawn is in shallow water areas, herring fishermen are routinely seen offshore in the area of the proposed discharge structure. The herring fishing organization should be contacted to determine past fishing experiences with herring location and activity.

5. Erosion Control

The first bulleted Best Management Practice addresses erosion control (PSA page 4.14-24) that utilizes "Temporary and permanent vegetation strategies." Any vegetation utilized must be 'native' so that invasive species is not introduced.

6. Other mitigation

CCSF reserves the right to comment further in the revised PSA or FSA after more data, analyses and evaluation as indicated above are available.

F. Additional Mitigations that should be Considered

1. Stormwater Runoff

The proposed project will increase the demand on the City's limited capacity to treat wastewater and storm water run-off in its combined sewer system. The increased demand on the City's sewage treatment system could increase the periodic discharge of untreated sewage into the Bay during winter months when the stormwater run-off causes the system to exceed capacity.

The Applicant should be required to provide complete on-site containment and treatment, or to contribute to the City's efforts to improve storm water management capability in the Southern Waterfront to protect water quality in the Bay. Such contribution should be consistent with the additional demand for storm water treatment or management associated with the power plant site.

2. Coordination with CSO Control Program or Stormwater Program

It may be possible to utilize excess capacity in the new outfall to carry combined sewer overflow from the San Francisco's combined sewer system. Use of the outfall would place the combined sewer overflow discharge further from shore and decrease potential recreational impacts. There should be an assessment of potential use of capacity in either the new outfall or possibly the abandoned Unit 3 outfall. Similarly, the outfalls could be used for stormwater discharges from this area from portions of San Francisco, which have separate sewers. The Applicant should discuss these potential options with San Francisco's wastewater program. (*See* San Francisco Public Works Code, Article 4.1 ("Industrial Waste"))

3. The Potential Use of Water Outfall As A Heating Source

The PSA does not address the feasibility of using power plant cooling water to provide a heating source for the public facilities in the area. The Applicant should be required to work with CCSF to determine if it is feasible to reuse power plant cooling water to heat nearby facilities as an alternative to being discharged into the Bay.

Soils

A. Dredging of Contaminated Soils

The PSA does not adequately address the environmental impacts that project construction would have as a result of the dredging of contaminated sediments in the Bay and the Islais Creek Channel, as well as on-site excavation of contaminated soil.[15]

On a continuing basis, the San Francisco Port addresses numerous issues pertaining to contaminated sediments along the waterfront. Such sediments may be encountered during dredging projects, wetland restoration projects, and redevelopment projects. The Port and the regulatory agencies that oversee contaminated sediment issues have established a good working relationship to address these sediments when they are encountered. All parties agree that there are unanswered questions regarding contaminated sediments, such as the toxicity of different compounds, how chemicals are transported in the Bay, and how specific compounds affect the food web. Periodically, the Port has been able to provide consulting expertise to help address issues that are of interest to the regulatory community and that have direct or indirect impacts on Port operations. The Applicant should confer with the Port about this program and is encouraged to support it.

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[15] Replacement Page 8.14-25, last paragraph of the AFC states that "The RWQCB often waives certification, after staff review, for small dredge projects of less than 50,000 cubic yards." This statement is true; however, because of the extent of contamination derived from historic use of the site for coal gasification CCSF will object to any application for a waiver.

B. High Concentrations of Polyaromatic Hydrocarbons (PAH) In Site Soil

The AFC[16] indicates:

- the presence of high concentrations of polyaromatic hydrocarbons (PAH) in the proposed site soil, including dense, non-aqueous, free-phase, PAH liquid;
- the free-phase PAH liquid occurs near the shoreline beneath the site; and
- the presence of high concentrations of PAH in Bay sediments adjacent to the site shoreline, including dense, non-aqueous, free-phase, PAH liquid.

PAH in the nearshore sediments originated onshore at the site and free-phase PAH liquid has migrated offshore, under the Bay. The PSA should analyze and evaluate:

- How will the design and/or construction minimize any further migration of PAH liquid during construction?
- How will the design and/or construction minimize any further migration of PAH liquid
- after completion of construction?
- How does the presence of PAH in site sediment impact human health and the Bay environment? What specific studies can provide the data required to quantify these risks?
- Will the construction or operation of the plant remobilize the existing PAH, causing further impacts to human health or the environment?
- What is the status of any voluntary cleanup efforts or Regional Board cleanup orders regarding the site? Do these efforts/orders cover only the land part of the site?
- Does an agreement exist between PG&E and the Applicant that specifies which corporation shall be responsible for investigation and/or remediation of the contaminated sediments and associated free-phase PAH liquid?
- PG&E's consultant (Geomatrix, 2000; p.30), hypothesized that the dense, non-aqueous, free-phase, PAH liquid encountered in monitoring wells beneath the site was not a threat to the Bay due to a "low permeability ridge" of Bay Mud that Geomatrix claimed existed along the shoreline. The data supporting this hypothesis was limited; the existence of PAH liquid beneath sediments in the Bay indicates that this hypothesis is false. In light of the more recent Bay sediment data (URS/Dames & Moore, 2000 and 2001), how will the new or previous site owner address the PAH liquid beneath the site?

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[16] Geomatrix Consultants, 2000, Report of Results, Additional Site Characterization, Potrero Power Plant Site. Prepared for Pacific Gas and Electric Co. April. URS/Dames & Moore, 2000, Draft Initial Findings Report, Offshore Sediment Sampling, Potrero Power Plant. Prepared for Southern Energy Co. [now Mirant]. September 28. URS/Dames & Moore, 2001, Final Offshore Sediment Characterization Report, Potrero Power Plant. Prepared for Mirant California LLC. May 18.

- Given the situation outlined in (7) above, will the proposed new construction negatively impact existing conditions or limit future cleanup options? Most importantly, will new construction provide additional routes for PAH liquid to migrate from the site offshore into Bay sediments?

N. WORKER SAFETY AND FIRE PROTECTION

CCSF agrees with the discussion and conditions included in this section of the PSA.

O. POWER PLANT RELIABILITY

1. Equipment Availability

The PSA recognizes that equipment availability is essential to ensure reliable plant operations. The PSA should address whether the current energy crisis has affected the cost and availability of parts for natural gas-fired turbines.

2. Fuel and Water Availability

The PSA expresses concern that additional natural gas pipeline capacity will be necessary to ensure reliable supply if the proposed project, the 500 MW Golden Gate Project, and Hunters Point are all operating simultaneously.[17] The PSA notes that a new pipeline may be required, but provides no detail about that project. (PSA page 5.4-5) The PSA should provide a detailed description of the proposed 8,000 lineal feet of gas pipeline and answer the following questions:

- Under what supply scenarios will the new pipeline be needed?
- Will it also loop the system to provide a secondary source of natural gas and improve reliability?
- What is the permitting process for installing the 8,000 feet of additional gas pipeline?
- What is the status/timeline of PG&E's study and how does it coincide with CEC's process?

A pipeline project that takes 9-12 months to construct may have substantial impacts that need to be analyzed and mitigated. CCSF reserves the right to comment further on this issue once sufficient has been provided.

P. TRANSMISSION SYSTEM ENGINEERING

The information provided in the PSA is insufficient to allow meaningful analysis of the impacts and mitigations related to the transmission system. The PSA should be reissued with the information discussed below.

1. A Detailed Facilities Study (DFS) and the CaISO's analysis are essential.

The PSA notes that the impacts on the transmission system, and therefore the mitigations for those impacts, cannot be known until PG&E completes the DFS in August 2001. (PSA page 5.5-5) Although the preliminary study performed by the Applicant indicates significant line

[17] As noted previously, San Francisco's Maxwell Ordinance requires that Hunters Point be shutdown within 90 days of the beginning of operations at Potrero 7, so the assumption that all three plants would be operating simultaneously is unrealistic except for the initial 90 day period.

overloads under normal conditions, appropriate mitigations cannot be determined until the more detailed study is performed. The PSA states that it expects the DFS to not have a significant impact on the ultimate interconnection for the Potrero plant, yet does not describe the study plan or explain the basis for this statement. (PSA page 5.5-7) The CEC staff has performed only minimal analysis of transmission impacts, deferring to the ISO and PG&E. The ISO has final approval authority for connection of the Potrero plant to PG&E's transmission system, but the ISO will not take a final position until after the DFS is performed.

The transmission route proposed for the project is also unknown until PG&E completes the DFS, since PG&E staff have identified several alternative routes and the Applicant studied alternatives as well. PG&E states that a final option cannot be selected until the DFS is performed. (PSA page 5.5-7) The mitigations that are appropriate may also differ depending on the route selected for the project. This information is critical to CCSF, since coordination with City transmission projects will help mitigate construction and traffic impacts as well as increase the economic benefits of the project to both CCSF and The Applicant. Clearly, much more study work needs to be completed before any conclusions can be made on the adequacy or desirability of the proposed interconnection.

2. The PSA should analyze transmission adequacy without Hunters Point

The PSA analysis relied upon the load flow studies performed by the Applicant in its preliminary assessment. The interconnection studies performed by Applicant and included in its Application all assumed no generation at the Hunters Point Power Plant. The alternatives section of the PSA claims that this is not a proper assumption. In that section the PSA asserts that the Hunters Point Power Plant is needed, in addition to the proposed plant, to provide adequate reliability. That assertion is inconsistent with relying on transmission studies showing Hunters Point output at zero. The PSA should analyze transmission adequacy without Hunters Point in order to be consistent with the Applicant's preliminary studies on which the PSA relies.

The Section entitled "Existing Facilities and Related Systems" has a brief discussion of the effect of the project on San Francisco reliability. The PSA refers to the conclusions of studies analyzing the transmission needs for the City but does not identify the assumptions that went into the studies nor how conditions may have changed since the studies were performed. Probably the most significant change is the adoption of the Maxwell Ordinance which calls for the shutdown of Hunters Point within 90 days of the construction of the project and a limited operation of the existing turbines at Potrero Power Plant. The transmission needs for the City also may change based upon changes to load growth and/or other factors. The PSA should, at a minimum, determine whether reliability of service to City loads is better with the existing Hunters Point Plant or with the Potrero 7 installed and the existing Hunters Point Plant removed.

3. The PSA should address specific San Francisco planning criteria

In the Laws, Ordinances, Regulations and Standards Section of Transmission Systems Engineering, the PSA mentions the WSCC and ISO general reliability criteria and the NERC Planning Standards, but it does not describe the specific part of the ISO planning standards that applies to San Francisco. There is no mention of ISO operating procedures T-126 and T-134, which will dictate when the plant will need to operate in order to ensure that the proposed project assists the ISO in providing reliability services for critical San Francisco and Bay Area Loads. These are the most important specific criteria which dictate the need for infrastructure to reliably serve the San Francisco load. The AFC describes those criteria in detail as well as the impact that the proposed project would have in satisfying those criteria. The PSA needs to address this issue.

4. The PSA should address the need for market power mitigation.

The PSA describes the Cal ISO Scheduling and Dispatch Protocols, the Day/Hour Ahead Inter-zonal Congestion Management Scheduling Protocol, the Transmission System Loss

Management Scheduling Protocol, and the creation of the Real Time Merit Order Stack, but it neglects even to mention the critical components related to the dispatch of the plant and the necessity to mitigate market power. There is no mention of the need for an RMR agreement and how that would affect plant operation. San Francisco has already been designated a congested zone where market power mitigation is required. Mitigation of market power, through an RMR agreement with the ISO or through some other cost-based sales contract, should be required by the CEC as a condition of operation.

5. The following changes to the PSA are required for accuracy

In the Transmission Line section (PSA page 5.5-4, second sentence, third paragraph):

- The PSA indicates that the cables will be buried in a trench six feet deep and wide. The PSA should note that trench irregularities and existing sewer pipes and obstructions may be encountered during construction and may require the cable and conduit to be installed over or under the obstruction. The installation of the cable and conduit should be performed in accordance with GO-128 requirements.

- In the Existing Facilities and Related Systems section (PSA page 5.5-4, first paragraph, second sentence): The description of the electric system serving San Francisco should state "CCSF is located in the PG&E service territory and is served by six overhead and one underground transmission lines that terminate at Martin Substation. From the Substation, a radial transmission network serves the downtown area."
- In the Existing Facilities and Relatead System section, second paragraph (PSA (PSA page 5.5-4–5.5-5,): The description of the transmission addition being studied for San Francisco is between the "Jefferson and Martin" substations, not the "San Mateo and Martin" substations as stated.

Q. ALTERNATIVES

In the introduction to the Alternatives Section, the PSA states that the purpose of the alternatives analysis is to assess alternatives that could feasibly attain the Applicant's proposed objectives and avoid or substantially lessen one or more of the significant effects of the project. This framework for analysis of alternatives is biased in favor of the proposed project and assumes that the Applicant's objectives are correct. Because the Applicant's objective is a 540 MW power plant, other feasible alternatives or a combination of alternatives are treated in a cursory manner or are dismissed without adequate consideration. CCSF recommends that the objective and evaluation criteria for the alternatives' analysis is broadened to enable the staff to effectively evaluate all alternatives.

At the June 19, 2001 community workshop, the CEC staff stated that the CEC is "now" prohibited from assessing whether there is a need for a proposed project. However, without a needs assessment, the No Project alternative or a smaller project alternative cannot be adequatly assessed. Moreover, without a needs assessment, it is not clear how alternatives, such as transmission, generation, distributed generation, renewables demand side management or any combination of these alternatives can be adequately evaluated.

1. Evaluation of Alternative Sites

The PSA addresses several alternative sites for the proposed project and briefly considers other means of addressing energy needs. However, there are many deficiencies in the PSA's consideration of alternative sites. For example, the consideration of the relative land use compatibility and environmental justice impacts at each of the "build" sites are not addressed. The PSA also needs to clearly identify constraints, such as location of the alternative site in relation to

the Martin switching station and relevant transmission lines. The PSA also makes repeated references to the potential power "islanding" of San Francisco and the Peninsula. The PSA needs to identify and analyze for each "build" alternative the extent to which the potential for "islanding" would be greater or comparable to expansion of the Potrero facility.

The analysis of two alternatives, the SF Thermal Plant and City Asphalt Plant, should be clarified and expanded. The SF Thermal Plant site would have less impact on those in the downtown area than the proposed project will have on the Potrero neighborhood. Most of the occupants are near the SF Thermal site only during weekday work hours. In contrast, Potrero residents are in proximity to the proposed project 24 hours a day, and 7 days a week. The PSA should include a comparative analysis of the health effects of the SF Thermal Plant and the proposed project.

The City Asphalt plant site is impractical for a 540 MW plant. However, the alternatives analysis fails to consider that this site and the SF Thermal site could be locations for cogeneration plants. These cogeneration plants could be part of a portfolio of generation that would allow for reduction of the size of the proposed project. The Alternatives analysis should consider the amount of co-generation capacity available at each of the sites.

2. Evaluation of Transmission Alternatives

The PSA does not adequately address transmission alternatives or a combination of transmission and other alternatives (such as a smaller power plant) as alternatives to the proposed project. The PSA acknowledges that the Jefferson-Martin 230kv-transmission project will be permitted in 2002 "whether or not the Potrero project is approved." (PSA at page 6-17) However, the PSA fails to adequately address or consider whether the Jefferson-Martin line as well as the other options in the CaISO San Francisco Long Term Study can meet the objectives of the proposed project. This evaluation is a critical aspect of the No Project alternative and it should be analyzed in the PSA.

Furthermore, the evaluation of transmission alternatives in the PSA is deficient in other key respects. First, the PSA does not evaluate the desireability of building additional transmission into San Francisco versus the construction of additional generation within the City. Although CCSF acknowledges the difficulty of the development of this type of comparison, it is essential that this comparison be done when evaluating the alternatives to the proposed project. This evaluation is required because adding transmission is an important and viable alternative to constructing power plants in densely populated areas where environmental impacts are more significant.

Secondly, neither the AFC nor the PSA describe the proposed Remedial Action Scheme (RAS) designed by PG&E and CaISO, and how that scheme would perform with or without the proposed project. The Applicant does a good job of describing how generation located within San Francisco provides power to critical CCSF customers when major transmission outages occur. However, in-San Francisco generation is most effective when the generation automatically matches the capability of the remaining transmission system. For example, on December 8, 1998, San Francisco went dark because the in-City generation went offline after a severe transmission disturbance. The RAS designed by PG&E and CaISO should vastly improve the chances of in-City generation accomplishing the results claimed by the Applicant. Therefore, the PSA must incorporate an evaluation and analysis of the RAS.

Thirdly, the PSA is devoid of an analysis of RMR contracts. Since the formation of the CaISO, needed reliability services and market power mitigation have been obtained in San Francisco and other congested zones through RMR contracts with generators. Local generation should only defer transmission if the costs of that generation is less than the ownership costs of the transmission. Given the expenses associated with RMR contracts, generation may be a more costly alternative than transmission for meeting San Francisco's reliability needs.

Finally, the PSA does not address market power issues. Transmission can limit locational market power. Prior to deregulation, market power was of limited concern. Now, curtailing locational market power is critical and its costs consumers and ratepayers hundreds of millions a year to do so. The PSA should acknowledge that locational market power will always exist in San Francisco if construction of new transmission is deferred. To prevent locational market power, transmission should be constructed, even if new generation is added unless there is a less costly method to provide reliability and mitigate locational market power.

3. Evaluation of Technology Alternatives .

a. Demand Side Management

The PSA provides only a cursory analysis of the potential for demand side management to replace some of the proposed project generation. The PSA claims the staff is prohibited from considering conservation programs as alterntives to a proposed generation project and that "Staff has already accounted for the effects all of the demand side management that is reasonably expected to occur in evaluating the future electricity needs of the Bay Area." (PSA at page 6-55) The demand side management section should be revised to clarify whether there has been an integrated assessment of need and if demand side management has been taken into account. The following questions should also be addressed:

- How much demand side management was included in the residential and in the commercial sectors?
- Did the demand side management estimate include the new Title 24 changes?
- Did the demand side management estimate account for the recent increased participation in existing programs?
- How much additional demand side management would be necessary to impact the size of the proposed plant?

b. Distributed Generation

The PSA's discussion of distributed generation is inadequate. The PSA states that "distributed energy is not a feasible alternative to the proposed project because of technical, institutional and regulatory barriers. Some types of distributed generation also are not feasible alternatives because they are not presently economical, and others because they have the potential to cause significant unmitigated environmental impacts." (PSA at page 6-56) Barriers can be overcome and impacts can be mitigated. The discussion of distributed generation does not clarify why, given the significant impacts the proposed project has on the Potrero/Bayview and Dogpatch communities of San Francisco, distributed generation cannot replace some of the proposed project generation.

In addition, it is not clear whether the distributed generation analysis included co-generation. Did CEC staff consider the reductions in emissions from a district heating system that replaces natural gas burning in water heaters and boilers and the resulting reduction in electric load from a district cooling system? The PSA should consider the emissions and electric demand reduction potential is in San Francisco from co-generated district heating and cooling systems.

Although renewable energy alternatives have higher costs, the PSA fails to recognize that they have great advantages in that they reduce adverse air quality, water and soil impacts. Renewable energy should be considered as part of an integrated assessment of electricity needs that may reduce the overall size of the and mitigate adverse impacts of the proposed project.

c. Renewable Resources

In the Renewable Resources section, CEC staff only discusses large centralized renewable energy plants, not decentralized plants. Such large centralized plants are not typically considered in an urban environment. This discussion is therefore inadequate and incomplete. The discussion should be expanded to include renewable resources that are appropriately sized for a dense, urban environment and an analysis of renewables as part of a portfolio of energy sources.

d. Alternative Generation Capacities

In this section, the CEC staff dismisses smaller power plant options because the plant would not meet the reliability objective of the project, which requires generation of at least 500 MW of electricity. However, this conclusion does not take into account that a portfolio of additional demand side management, code improvements, co-generation, renewable resources, and distributed generation may enable the size of the proposed project to be reduced. The conclusion also does not include transmission alternatives that would enhance reliability and provide additional capacity.

III. COMMENTS FROM THE POTRERO CITIZEN ADVISORY TASK FORCE

In 1999, the San Francisco Board of Supervisors by Resolution 362-99, created the Potrero Power Plant Citizens Advisory Task Force. The Task Force was charged with providing the City input on Mirant's proposal to expand the Potrero Power Plant and monitoring Mirant's Application for Certification to the California Energy Commission.

In particular, the Task Force has been concerned about the issues that directly affect the neighborhoods of Bayview/Hunters Point and Potrero Hill/Dogpatch. The Task Force has met monthly since June 2000. In December 2000, the San Francisco Board of Supervisors passed Resolution 1055-00 extending the term of the Task Force to October 31, 2001. Philip DeAndrade chairs the Task Force; Sarah Ames is the vice-chair. Other members of the Task Force are Robert Boileau, John Borg, Joe Boss, Babette Drefke, James Firth, Richard Millet and Claude Wilson.

In addition to the comments being submitted by CCSF, the Potrero Power Plant Citizens Advisory Task Force desired to submit comments for consideration by the CEC staff. The Comments of the Task Force are attached hereto as Appendix 2. If the CEC staff has any questions about the Task Force comments, the chair, Phil DeAndrade, may be contacted through Jill Lerner, Office of the City Administrator, City and County of San Francisco.

IV. COMMENTS OF THE PIER 70 CITIZENS ADVISORY GROUP

The Pier 70 Citizens Advisory Group was formed by the San Francisco Port to provide the Port with community input on planning and development issues in the larger Pier 70 area of the San Francisco waterfront. Proposition H adopted by the San Francisco voters in 1990 required that the Port develop a comprehensive land use plan for the San Francisco waterfront. The Waterfront Land Use Plan includes an implementation program that established the Port's use of Citizen Advisory Committees to provide input and guidance at the early stage of the development process when the feasibility of alternatives is being analyzed. The Advisory Committees are largely responsible for the creation of a set of project goals and objectives that shape the development concept for each waterfront development project. The Port Advisory Committee members are chosen to ensure that an appropriate balance of community, industry and environmental stakeholders are represented.

The chair of the Pier 70 Citizens Advisory Group is Toby Levine. Other members of the Advisory Group are: John Borg, Meb Gordon, Susan Eslick, Dennis Herrera, Joe Boss, Paul Sherrill, Corinne Woods, Julia Viera, Carl Hanson, Greg Markelus, Jennifer Clary, Charles Chase,

Mara Brazer, John Kalaki, Tom Escher, Stan Smith, Paul Nixon, Dwayne Jones, Steven Vettel, Shelley Bell, Mohammed Nuru, Toye Moses, and John Moran.

In addition to the comments being submitted by CCSF, the 70 Citizens Advisory Group desired to submit comments for consideration by the CEC staff. The Comments of the Advisory Group are attached hereto as Appendix 3. If the CEC staff has any questions about the Advisory Group comments, the chair, Toby Levine, may be contacted through Byron Rhett, Director of Planning and Development, San Francisco Port.

V. CONCLUSION

CCSF's comments provide detail information regarding numerous areas where the PSA should be supplemented or additional information needs to be provided. CCSF looks forward to continuing to work with the CEC staff, the Applicant, residents of San Francisco and others in identifying the full extent of impacts from the proposed project.

Dated: **July 2, 2001**

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